

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1303	((549/70) or (546/314) or (546/315)).CCLS.	US-PGPUB; USPAT	OR	OFF	2007/10/11 18:33
L2	184	1 and heterocyclic and aldehyde	US-PGPUB; USPAT	OR	OFF	2007/10/11 18:34

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PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

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NEWS	1		Web Page for STN Seminar Schedule - N. America
NEWS	2	JUL 02	LMEDLINE coverage updated
NEWS	3	JUL 02	SCISEARCH enhanced with complete author names
NEWS	4	JUL 02	CHEMCATS accession numbers revised
NEWS	5	JUL 02	CA/Caplus enhanced with utility model patents from China
NEWS	6	JUL 16	Caplus enhanced with French and German abstracts
NEWS	7	JUL 18	CA/Caplus patent coverage enhanced
NEWS	8	JUL 26	USPATFULL/USPAT2 enhanced with IPC reclassification
NEWS	9	JUL 30	USGENE now available on STN
NEWS	10	AUG 06	CAS REGISTRY enhanced with new experimental property tags
NEWS	11	AUG 06	BEILSTEIN updated with new compounds
NEWS	12	AUG 06	FSTA enhanced with new thesaurus edition
NEWS	13	AUG 13	CA/Caplus enhanced with additional kind codes for granted patents
NEWS	14	AUG 20	CA/Caplus enhanced with CAS indexing in pre-1907 records
NEWS	15	AUG 27	Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB
NEWS	16	AUG 27	USPATOLD now available on STN
NEWS	17	AUG 28	CAS REGISTRY enhanced with additional experimental spectral property data
NEWS	18	SEP 07	STN AnaVist, Version 2.0, now available with Derwent World Patents Index
NEWS	19	SEP 13	FORIS renamed to SOFIS
NEWS	20	SEP 13	INPADOCDB enhanced with monthly SDI frequency
NEWS	21	SEP 17	CA/Caplus enhanced with printed CA page images from 1967-1998
NEWS	22	SEP 17	Caplus coverage extended to include traditional medicine patents
NEWS	23	SEP 24	EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS	24	OCT 02	CA/Caplus enhanced with pre-1907 records from Chemisches Zentralblatt
NEWS EXPRESS	19 SEPTEMBER 2007: CURRENT WINDOWS VERSION IS V8.2, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007.		
NEWS HOURS	STN Operating Hours Plus Help Desk Availability		
NEWS LOGIN	Welcome Banner and News Items		
NEWS IPC8	For general information regarding STN implementation of IPC 8		

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Updated Search

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* * * * * STN Columbus * * * * *

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=> file hcaplus		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.21	0.21

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FILE LAST UPDATED: 10 Oct 2007 (20071010/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s shiomi, y?/au and uno, o?/auand ohta, a?/au and sunakami, t?/au
'?' TRUNCATION SYMBOL NOT VALID WITHIN 'UNO, O?/AUAND OHTA, A?'
The truncation symbol ? may be used only at the end of a search term. To specify a variable character within a word use '!', e.g., 'wom!n' to search for both 'woman' and 'women'. Enter "HELP TRUNCATION" at an arrow prompt (=>) for more information.

=> s shiomi, y?/au and uno, o?/au and ohta, a?/au and sunakami, t?/au
228 SHIOMI, Y?/AU
37 UNO, O?/AU
930 OHTA, A?/AU
2 SUNAKAMI, T?/AU
L1 1 SHIOMI, Y?/AU AND UNO, O?/AU AND OHTA, A?/AU AND SUNAKAMI, T?/AU
=> d l1, ibib abs hitstr, 1

L1 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:777759 HCAPLUS
DOCUMENT NUMBER: 139:276804
TITLE: Process for producing heterocyclic aldehyde
INVENTOR(S): Shiomi, Yasuhiro; Uno, Osamu;
Ohta, Akio; Sunakami, Takeshi
PATENT ASSIGNEE(S): Koei Chemical Co., Ltd., Japan

Updated Search

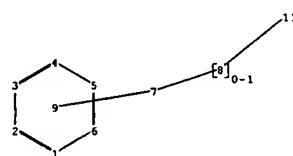
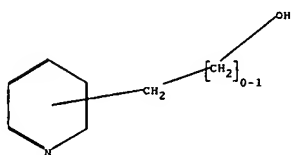
SOURCE: PCT Int. Appl., 48 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003080575	A1	20031002	WO 2003-JP3568	20030325
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003221048	A1	20031008	AU 2003-221048	20030325
GB 2404190	A	20050126	GB 2004-21452	20030325
US 2005124807	A1	20050609	US 2003-509228	20030325
PRIORITY APPLN. INFO.:			JP 2002-86974	A 20020326
			WO 2003-JP3568	W 20030325

OTHER SOURCE(S): MARPAT 139:276804

AB The patent relates to a process in which a heterocyclic alc. is oxidized to produce a heterocyclic aldehyde with high selectivity in high yield. The process comprises reacting a heterocyclic compound having per mol. at least one hydroxymethyl group bonded to a carbon atom of the heterocycle with a hypohalogenous acid salt in the presence of a base to oxidize the hydroxymethyl group to thereby produce the corresponding heterocyclic aldehyde, wherein the reaction is conducted in the presence of a 2,2,6,6-tetramethylpiperidin-1-oxyl derivative having per mol. two or more 2,2,6,6-tetramethylpiperidin-1-oxyl-4-yl groups. Thus, 3-pyridine-methanol was oxidized by sodium hypochlorite in presence of an oligomer derivative obtained from Chimassorb 944LD with hydrogen peroxide and generated 3-pyridinecarbaldehyde (90.1%) and nicotinic acid (3.4%).

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT



chain nodes :

7 8 11

ring nodes :

1 2 3 4 5 6

chain bonds :

7-8 8-11

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6

exact bonds :

7-8 8-11

normalized bonds :

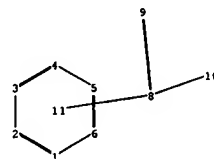
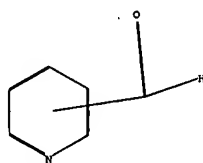
1-2 1-6 2-3 3-4 4-5 5-6

isolated ring systems :

containing 1 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:Atom 11:CLASS



chain nodes :

8 9 10

ring nodes :

1 2 3 4 5 6

chain bonds :

8-9 8-10

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6

exact/norm bonds :

8-9

exact bonds :

8-10

normalized bonds :

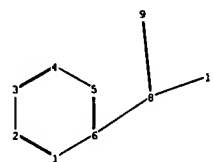
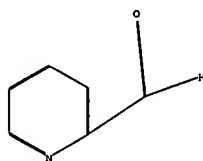
1-2 1-6 2-3 3-4 4-5 5-6

isolated ring systems :

containing 1 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 8:CLASS 9:CLASS 10:CLASS 11:Atom



chain nodes :

8 9 10

ring nodes :

1 2 3 4 5 6

chain bonds :

6-8 8-9 8-10

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6

exact/norm bonds :

8-9

exact bonds :

6-8 8-10

normalized bonds :

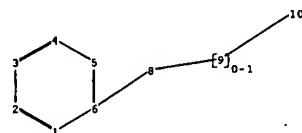
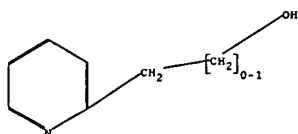
1-2 1-6 2-3 3-4 4-5 5-6

isolated ring systems :

containing 1 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 8:CLASS 9:CLASS 10:CLASS



chain nodes :

8 9 10

ring nodes :

1 2 3 4 5 6

chain bonds :

6-8 8-9 9-10

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6

exact bonds :

6-8 8-9 9-10

normalized bonds :

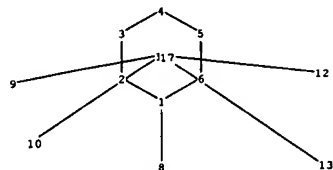
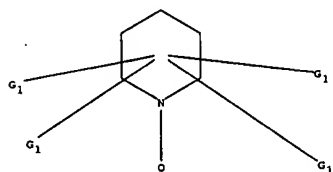
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isolated ring systems :

containing 1 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 8:CLASS 9:CLASS 10:CLASS



chain nodes :

8 9 10 12 13

ring nodes :

1 2 3 4 5 6

chain bonds :

1-8

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6

exact/norm bonds :

1-2 1-6 1-8 2-3 3-4 4-5 5-6

isolated ring systems :

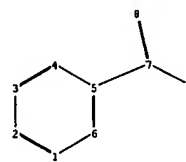
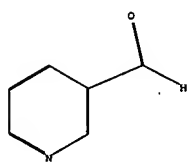
containing 1 :

G1:CH3,Et

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 8:CLASS 9:CLASS 10:CLASS 12:CLASS
13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS

(Untitled)



chain nodes :

7 8 9

ring nodes :

1 2 3 4 5 6

chain bonds :

5-7 7-8 7-9

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6

exact/norm bonds :

7-8

exact bonds :

5-7 7-9

normalized bonds :

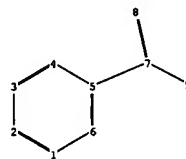
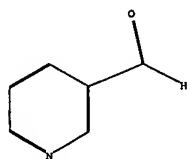
1-2 1-6 2-3 3-4 4-5 5-6

isolated ring systems :

containing 1 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS



chain nodes :

7 8 9

ring nodes :

1 2 3 4 5 6

chain bonds :

5-7 7-8 7-9

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6

exact/norm bonds :

7-8

exact bonds :

5-7 7-9

normalized bonds :

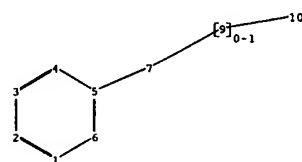
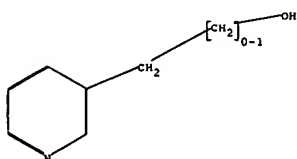
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isolated ring systems :

containing 1 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS



chain nodes :

7 9 10

ring nodes :

1 2 3 4 5 6

chain bonds :

5-7 7-9 9-10

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6

exact bonds :

5-7 7-9 9-10

normalized bonds :

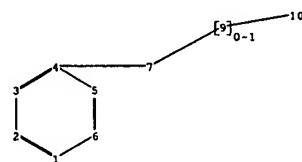
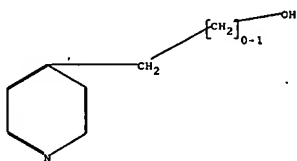
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isolated ring systems :

containing 1 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 9:CLASS 10:CLASS



chain nodes :

7 9 10

ring nodes :

1 2 3 4 5 6

chain bonds :

4-7 7-9 9-10

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6

exact bonds :

4-7 7-9 9-10

normalized bonds :

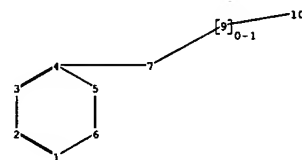
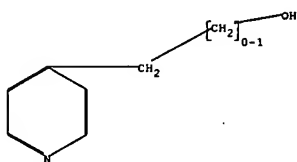
1-2 1-6 2-3 3-4 4-5 5-6

isolated ring systems :

containing 1 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 9:CLASS 10:CLASS



chain nodes :

7 9 10

ring nodes :

1 2 3 4 5 6

chain bonds :

4-7 7-9 9-10

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6

exact bonds :

4-7 7-9 9-10

normalized bonds :

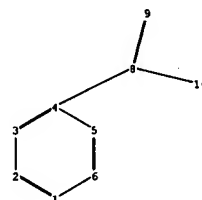
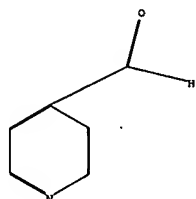
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isolated ring systems :

containing 1 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 9:CLASS 10:CLASS



chain nodes :

8 9 10

ring nodes :

1 2 3 4 5 6

chain bonds :

4-8 8-9 8-10

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6

exact/norm bonds :

8-9

exact bonds :

4-8 8-10

normalized bonds :

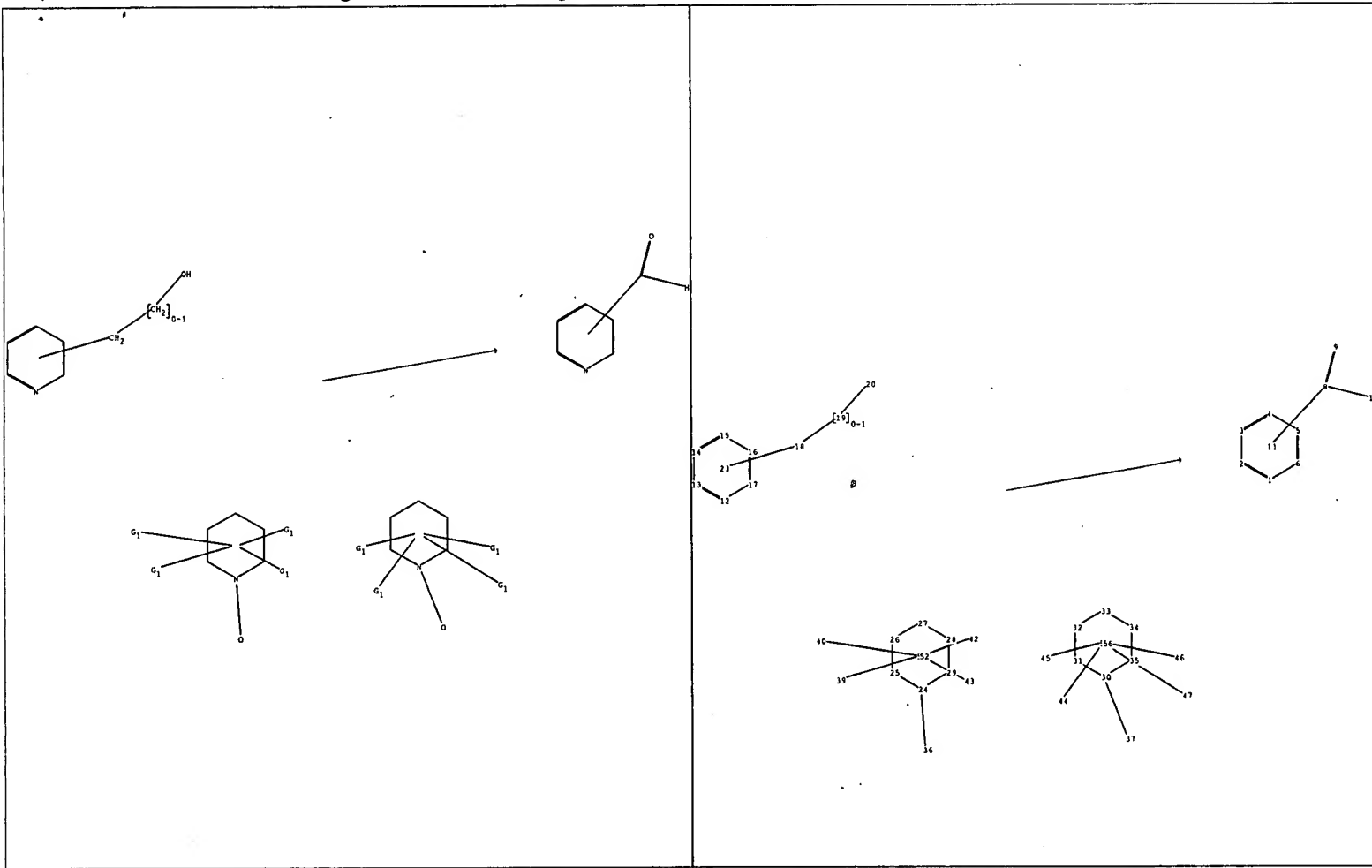
1-2 1-6 2-3 3-4 4-5 5-6

isolated ring systems :

containing 1 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 8:CLASS 9:CLASS 10:CLASS



chain nodes :

8 9 10 18 19 20 36 37 39 40 42 43 44 45 46 47

ring nodes :

1 2 3 4 5 6 12 13 14 15 16 17 24 25 26 27 28 29 30 31 32 33 34 35

chain bonds :

8-10 8-9 18-19 19-20 24-36 30-37

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 12-13 12-17 13-14 14-15 15-16 16-17 24-25 24-29
25-26 26-27 27-28 28-29 30-31 30-35 31-32 32-33 33-34 34-35

exact/norm bonds :

8-9 24-25 24-29 24-36 25-26 26-27 27-28 28-29 30-31 30-35 30-37 31-32 32-33
33-34 34-35

exact bonds :

8-10 18-19 19-20

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6 12-13 12-17 13-14 14-15 15-16 16-17

isolated ring systems :

containing 1 : 12 : 24 : 30 :

G1:CH3,Et

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 8:CLASS 9:CLASS 10:CLASS 11:Atom
12:CLASS 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:CLASS 19:CLASS 20:CLASS
23:Atom 24:Atom 25:Atom 26:Atom 27:Atom 28:Atom 29:Atom 30:Atom 31:Atom 32:Atom
33:Atom 34:Atom 35:Atom 36:CLASS 37:CLASS 39:CLASS 40:CLASS 42:CLASS 43:CLASS
44:CLASS

45:CLASS 46:CLASS 47:CLASS 49:Atom 50:Atom 51:Atom 52:Atom 53:Atom

* 54:Atom 55:Atom 56:Atom

fragments assigned reactant role:

containing 12

fragments assigned reagent role:

containing 24

containing 30

fragments assigned product role:

containing 1

1 2 3 4 5 6 21 22 24 25 27 28 29 30 31 32

9 10 11 12 13 14 15 16 17 18 19 20 44 45 46 47 48 51 52 53 54 55

1-3 1-2 4-5 5-6 9-21 15-22

9-10	9-14	10-11	11-12	12-13	13-14	15-16	15-20	16-17	17-18	18-19	19-20	44-45
44-48	45-46	46-47	47-48	51-52	51-55	52-53	53-54	54-55				

1-2 9-10 9-14 9-21 10-11 11-12 12-13 13-14 15-16 15-20 15-22 16-17 17-18
18-19 19-20

1-3 4-5 5-6 44-45 44-48 45-46 46-47 47-48 51-52 51-55 52-53 53-54 54-55

containing 44 : 51 :

Match level :

```

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 9:Atom 10:Atom 11:Atom 12:Atom
13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom 20:Atom 21:CLASS
22:CLASS 24:CLASS 25:CLASS 27:CLASS 28:CLASS 29:CLASS 30:CLASS 31:CLASS 32:CLASS
34:Atom 35:Atom 36:Atom 37:Atom 38:Atom 39:Atom 40:Atom 41:Atom 44:Atom 45:Atom
46:Atom 47:Atom 48:Atom 49:CLASS 51:Atom 52:Atom 53:Atom 54:Atom 55:Atom
56:CLASS

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fragments assigned reactant role:
```

containing 4

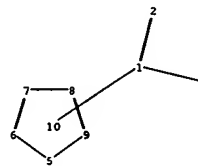
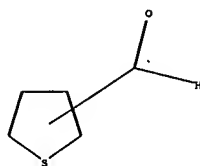
fragments assigned reagent role:

containing 9

containing 15

fragments assigned product role:

containing 1



chain nodes :

1 2 3

ring nodes :

5 6 7 8 9

chain bonds :

1-3 1-2

ring bonds :

5-6 5-9 6-7 7-8 8-9

exact/norm bonds :

1-2

exact bonds :

1-3 5-6 5-9 6-7 7-8 8-9

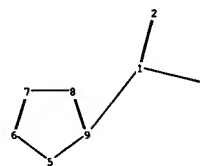
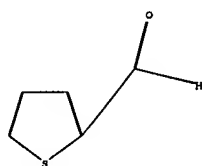
isolated ring systems :

containing 5 :

G1:CH3,Et

Match level :

1:CLASS 2:CLASS 3:CLASS 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:CLASS



chain nodes :

1 2 3

ring nodes :

5 6 7 8 9

chain bonds :

1-3 1-2 1-9

ring bonds :

5-6 5-9 6-7 7-8 8-9

exact/norm bonds :

1-2

exact bonds :

1-3 1-9 5-6 5-9 6-7 7-8 8-9

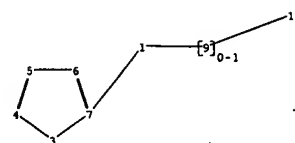
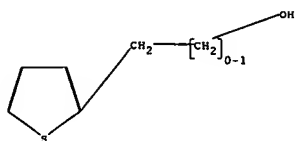
isolated ring systems :

containing 5 :

G1:CH3,Et

Match level :

1:CLASS 2:CLASS 3:CLASS 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom



chain nodes :

1 9 10

ring nodes :

3 4 5 6 7

chain bonds :

1-7 1-9 9-10

ring bonds :

3-4 3-7 4-5 5-6 6-7

exact bonds :

1-7 1-9 3-4 3-7 4-5 5-6 6-7 9-10

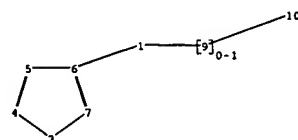
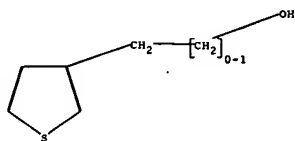
isolated ring systems :

containing 3 :

G1:CH3,Et

Match level :

1:CLASS 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 9:CLASS 10:CLASS



chain nodes :

1 9 10

ring nodes :

3 4 5 6 7

chain bonds :

1-9 1-6 9-10

ring bonds :

3-4 3-7 4-5 5-6 6-7

exact bonds :

1-9 1-6 3-4 3-7 4-5 5-6 6-7 9-10

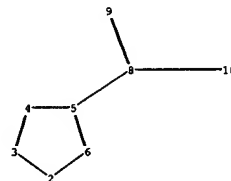
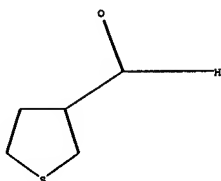
isolated ring systems :

containing 3 :

G1:CH3,Et

Match level :

1:CLASS 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 9:CLASS 10:CLASS



chain nodes :

8 9 10

ring nodes :

2 3 4 5 6

chain bonds :

5-8 8-9 8-10

ring bonds :

2-3 2-6 3-4 4-5 5-6

exact/norm bonds :

8-9

exact bonds :

2-3 2-6 3-4 4-5 5-6 5-8 8-10

isolated ring systems :

containing 2 :

G1:CH3,Et

Match level :

2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 8:CLASS 9:CLASS 10:CLASS

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:ssspta1612bxx

PASSWORD:

* * * * * RECONNECTED TO STN INTERNATIONAL * * * * *
SESSION RESUMED IN FILE 'REGISTRY' AT 16:20:57 ON 11 OCT 2007
FILE 'REGISTRY' ENTERED AT 16:20:57 ON 11 OCT 2007
COPYRIGHT (C) 2007 American Chemical Society (ACS)
COST IN U.S. DOLLARS

	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	7.35	7.56

=> file reg

COST IN U.S. DOLLARS

	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	7.35	7.56

FILE 'REGISTRY' ENTERED AT 16:21:06 ON 11 OCT 2007
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STRUCTURE FILE UPDATES: 10 OCT 2007 HIGHEST RN 950149-06-1
DICTIONARY FILE UPDATES: 10 OCT 2007 HIGHEST RN 950149-06-1

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TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

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predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=>

Uploading C:\Documents and Settings\brobinson1\My Documents\stnweb\Queries\A34rg.str

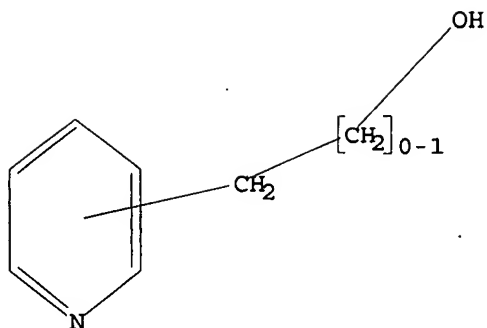
L2 STRUCTURE UPLOADED

=> d 12

L2 HAS NO ANSWERS

L2 STR

Updated Search



Structure attributes must be viewed using STN Express query preparation.

=> s 12

SAMPLE SEARCH INITIATED 16:22:52 FILE 'REGISTRY'
 SAMPLE SCREEN SEARCH COMPLETED - 139214 TO ITERATE

1.4% PROCESSED 2000 ITERATIONS
 INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
 SEARCH TIME: 00.00.01

9 ANSWERS

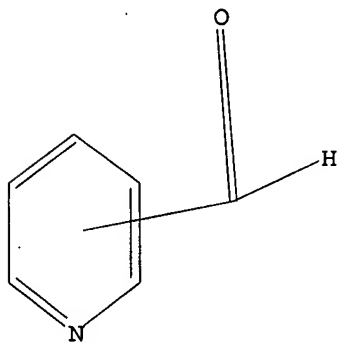
FULL FILE PROJECTIONS: ONLINE **INCOMPLETE**
 BATCH **INCOMPLETE**
 PROJECTED ITERATIONS: 2762232 TO 2806328
 PROJECTED ANSWERS: 11028 TO 14030

L3 9 SEA SSS SAM L2

=>
 Uploading C:\Documents and Settings\brobinson1\My
 Documents\stnweb\Queries\asee32.str

L4 STRUCTURE UPLOADED

=> d 14
 L4 HAS NO ANSWERS
 L4 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 14

Updated Search

SAMPLE SEARCH INITIATED 16:24:38 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 139214 TO ITERATE

1.4% PROCESSED 2000 ITERATIONS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

4 ANSWERS

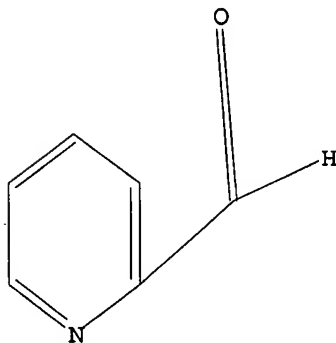
FULL FILE PROJECTIONS: ONLINE **INCOMPLETE**
BATCH **INCOMPLETE**
PROJECTED ITERATIONS: 2762232 TO 2806328
PROJECTED ANSWERS: 4567 TO 6569

L5 4 SEA SSS SAM L4

=>
Uploading C:\Documents and Settings\brobinson1\My
Documents\stnweb\Queries\asdf.erg.str

L6 STRUCTURE UPLOADED

=> d 16
L6 HAS NO ANSWERS
L6 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 16
SAMPLE SEARCH INITIATED 16:26:37 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 10545 TO ITERATE

19.0% PROCESSED 2000 ITERATIONS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

13 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 204746 TO 217054
PROJECTED ANSWERS: 874 TO 1866

L7 13 SEA SSS SAM L6

=> s 16 full
THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 171.65 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y
FULL SEARCH INITIATED 16:26:43 FILE 'REGISTRY'

Updated Search

FULL SCREEN SEARCH COMPLETED - 208017 TO ITERATE

100.0% PROCESSED 208017 ITERATIONS
SEARCH TIME: 00.00.01

1553 ANSWERS

L8 1553 SEA SSS FUL L6

=> file hcaplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

176.15

183.71

FILE 'HCAPLUS' ENTERED AT 16:26:51 ON 11 OCT 2007

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FILE COVERS 1907 - 11 Oct 2007 VOL 147 ISS 16

FILE LAST UPDATED: 10 Oct 2007 (20071010/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l8/prep

6296 L8

4473482 PREP/RL

L9 1262 L8/PREP

(L8 (L) PREP/RL)

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

2.60

186.31

FILE 'REGISTRY' ENTERED AT 16:27:02 ON 11 OCT 2007

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STRUCTURE FILE UPDATES: 10 OCT 2007 HIGHEST RN 950149-06-1

DICTIONARY FILE UPDATES: 10 OCT 2007 HIGHEST RN 950149-06-1

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TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Updated Search

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<http://www.cas.org/support/stngen/stndoc/properties.html>

=>

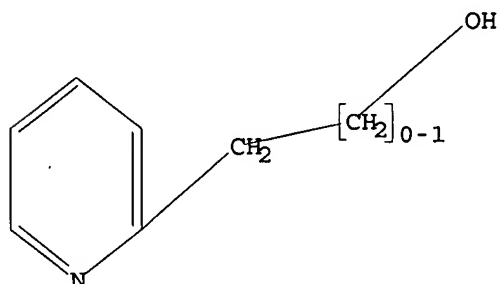
Uploading C:\Documents and Settings\brobinson1\My Documents\stnweb\Queries\6yh.str

L10 STRUCTURE UPLOADED

=> d l10

L10 HAS NO ANSWERS

L10 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l10

SAMPLE SEARCH INITIATED 16:28:23 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 6312 TO ITERATE

31.7% PROCESSED 2000 ITERATIONS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

50 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**

PROJECTED ITERATIONS: 121477 TO 131003
PROJECTED ANSWERS: 3187 TO 4891

L11 50 SEA SSS SAM L10

=> s l10 full

THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 171.65 U.S. DOLLARS

DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y

FULL SEARCH INITIATED 16:28:31 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 123569 TO ITERATE

100.0% PROCESSED 123569 ITERATIONS
SEARCH TIME: 00.00.01

3368 ANSWERS

L12 3368 SEA SSS FUL L10

Updated Search

=> file hcaplus
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
173.00	359.31

FULL ESTIMATED COST

FILE 'HCAPLUS' ENTERED AT 16:28:36 ON 11 OCT 2007
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=> s l12/rct
4407 L12
3023813 RCT/RL
L13 2593 L12/RCT
(L12 (L) RCT/RL)

=> d his

(FILE 'HOME' ENTERED AT 16:12:38 ON 11 OCT 2007)

FILE 'REGISTRY' ENTERED AT 16:13:27 ON 11 OCT 2007
E UNDECANOL/CN
L1 2 S E3

FILE 'REGISTRY' ENTERED AT 16:21:06 ON 11 OCT 2007
L2 STRUCTURE UPLOADED
L3 9 S L2
L4 STRUCTURE UPLOADED
L5 4 S L4
L6 STRUCTURE UPLOADED
L7 13 S L6
L8 1553 S L6 FULL

FILE 'HCAPLUS' ENTERED AT 16:26:51 ON 11 OCT 2007
L9 1262 S L8/PREP

FILE 'REGISTRY' ENTERED AT 16:27:02 ON 11 OCT 2007
L10 STRUCTURE UPLOADED
L11 50 S L10
L12 3368 S L10 FULL

FILE 'HCAPLUS' ENTERED AT 16:28:36 ON 11 OCT 2007

Updated Search

L13 2593 S L12/RCT

=> s l13 and l9

L14 470 L13 AND L9

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

ENTRY

TOTAL

SESSION

FULL ESTIMATED COST

2.60

361.91

FILE 'REGISTRY' ENTERED AT 16:29:01 ON 11 OCT 2007
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DICTIONARY FILE UPDATES: 10 OCT 2007 HIGHEST RN 950149-06-1

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REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=>

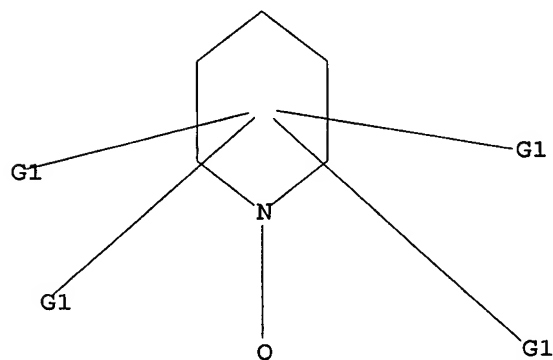
Uploading c:\Documents and Settings\brobinson1\My Documents\stnweb\Queries\asdfnm.st

L15 STRUCTURE UPLOADED

=> d l15

L15 HAS NO ANSWERS

L15 STR



G1 Me,Et

Updated Search

Structure attributes must be viewed using STN Express query preparation.

=> s l15

SAMPLE SEARCH INITIATED 16:31:04 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 3705 TO ITERATE

54.0% PROCESSED 2000 ITERATIONS 50 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 70450 TO 77750
PROJECTED ANSWERS: 7765 TO 10315

L16 50 SEA SSS SAM L15

=> s l15 full

THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 171.65 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y
FULL SEARCH INITIATED 16:31:09 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 74376 TO ITERATE

100.0% PROCESSED 74376 ITERATIONS 8707 ANSWERS
SEARCH TIME: 00.00.01

L17 8707 SEA SSS FUL L15

=> file hcaplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	173.45	535.36

FILE 'HCAPLUS' ENTERED AT 16:31:15 ON 11 OCT 2007
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FILE LAST UPDATED: 10 Oct 2007 (20071010/ED)

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=> s l17

L18 10014 L17

Updated Search

=> d his

(FILE 'HOME' ENTERED AT 16:12:38 ON 11 OCT 2007)

FILE 'REGISTRY' ENTERED AT 16:13:27 ON 11 OCT 2007
E UNDECANOL/CN

L1 2 S E3

FILE 'REGISTRY' ENTERED AT 16:21:06 ON 11 OCT 2007

L2 STRUCTURE UPLOADED

L3 9 S L2

L4 STRUCTURE UPLOADED

L5 4 S L4

L6 STRUCTURE UPLOADED

L7 13 S L6

L8 1553 S L6 FULL

FILE 'HCAPLUS' ENTERED AT 16:26:51 ON 11 OCT 2007

L9 1262 S L8/PREP

FILE 'REGISTRY' ENTERED AT 16:27:02 ON 11 OCT 2007

L10 STRUCTURE UPLOADED

L11 50 S L10

L12 3368 S L10 FULL

FILE 'HCAPLUS' ENTERED AT 16:28:36 ON 11 OCT 2007

L13 2593 S L12/RCT

L14 470 S L13 AND L9

FILE 'REGISTRY' ENTERED AT 16:29:01 ON 11 OCT 2007

L15 STRUCTURE UPLOADED

L16 50 S L15

L17 8707 S L15 FULL

FILE 'HCAPLUS' ENTERED AT 16:31:15 ON 11 OCT 2007

L18 10014 S L17

=> s l18 and l14

L19 3 L18 AND L14

=> d l19, ibib abs hitstr, 1-3

L19 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:761970 HCAPLUS

DOCUMENT NUMBER: 145:356134

TITLE: Cu(II)-Catalyzed Selective Aerobic Oxidation of Alcohols under Mild Conditions

AUTHOR(S): Jiang, Nan; Ragauskas, Arthur J.

CORPORATE SOURCE: Department of Chemistry, Georgia Institute of Technology, Atlanta, GA, 30332, USA

SOURCE: Journal of Organic Chemistry (2006), 71(18), 7087-7090
CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 145:356134

AB An efficient four-component system consisting of acetamido-TEMPO/Cu(ClO4)2/TMDP/DABCO in DMSO has been developed for room-temperature aerobic alc. oxidation Under the optimal conditions, various alcs. could be converted into their corresponding aldehydes or ketones in good to excellent yields. The newly developed catalytic system could also be

Updated Search

recycled and reused for three runs without any significant loss of catalytic activity.

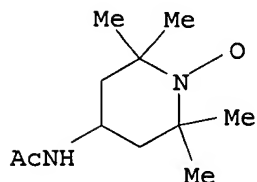
IT 14691-89-5, 4-Acetamido-TEMPO

RL: CAT (Catalyst use); USES (Uses)

(preparation of aldehydes or ketones by aerobic alc. oxidation catalyzed by acetamido-TEMPO/Cu(ClO₄)₂/TMDP/DABCO in DMSO)

RN 14691-89-5 HCAPLUS

CN 1-Piperidinyloxy, 4-(acetylamino)-2,2,6,6-tetramethyl- (CA INDEX NAME)



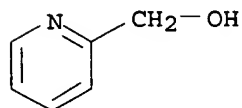
IT 586-98-1, 2-Pyridinemethanol

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of aldehydes or ketones by aerobic alc. oxidation catalyzed by acetamido-TEMPO/Cu(ClO₄)₂/TMDP/DABCO in DMSO)

RN 586-98-1 HCAPLUS

CN 2-Pyridinemethanol (CA INDEX NAME)



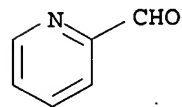
IT 1121-60-4P, 2-Formylpyridine

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of aldehydes or ketones by aerobic alc. oxidation catalyzed by acetamido-TEMPO/Cu(ClO₄)₂/TMDP/DABCO in DMSO)

RN 1121-60-4 HCAPLUS

CN 2-Pyridinecarboxaldehyde (CA INDEX NAME)



REFERENCE COUNT: 80 THERE ARE 80 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:1148403 HCAPLUS

DOCUMENT NUMBER: 144:51217

TITLE: NaNO₂-activated, iron-TEMPO catalyst system for aerobic alcohol oxidation under mild conditions

AUTHOR(S): Wang, Naiwei; Liu, Renhua; Chen, Jiping; Liang, Xinmiao

CORPORATE SOURCE: Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Dalian, 116023, Peop. Rep. China

SOURCE: Chemical Communications (Cambridge, United Kingdom) (2005), (42), 5322-5324

Updated Search

CODEN: CHCOFS; ISSN: 1359-7345

PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 144:51217

AB FeCl₃-TEMPO-NaNO₂ catalyzes the selective and mild aerobic oxidation of a broad range of alcs. to the corresponding aldehydes and ketones.

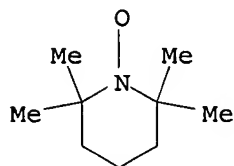
IT 2564-83-2, Tempo

RL: CAT (Catalyst use); USES (Uses)

(preparation of aldehydes and ketones via FeCl₃-TEMPO-NaNO₂ catalyzed selective aerobic oxidation of alcs.)

RN 2564-83-2 HCAPLUS

CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



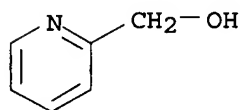
IT 586-98-1, 2-Hydroxymethylpyridine

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of aldehydes and ketones via FeCl₃-TEMPO-NaNO₂ catalyzed selective aerobic oxidation of alcs.)

RN 586-98-1 HCAPLUS

CN 2-Pyridinemethanol (CA INDEX NAME)



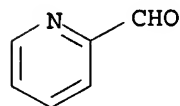
IT 1121-60-4P, 2-Pyridinecarboxaldehyde

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of aldehydes and ketones via FeCl₃-TEMPO-NaNO₂ catalyzed selective aerobic oxidation of alcs.)

RN 1121-60-4 HCAPLUS

CN 2-Pyridinecarboxaldehyde (CA INDEX NAME)



REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:664039 HCAPLUS

DOCUMENT NUMBER: 139:323311

TITLE: A Convenient Nitroxyl Radical Catalyst for the Selective Oxidation of Primary and Secondary Alcohols to Aldehydes and Ketones by O₂ and H₂O₂ under Mild Conditions

Updated Search

AUTHOR(S): Minisci, Francesco; Recupero, Francesco; Rodino, Marianna; Sala, Massimiliano; Schneider, Armin

CORPORATE SOURCE: Dipartimento di Chimica, Materiali e Ingegneria Chimica "Giulio Natta", Politecnico di Milano, Milan, 20131, Italy

SOURCE: Organic Process Research & Development (2003), 7(6), 794-798
CODEN: OPRDFK; ISSN: 1083-6160

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

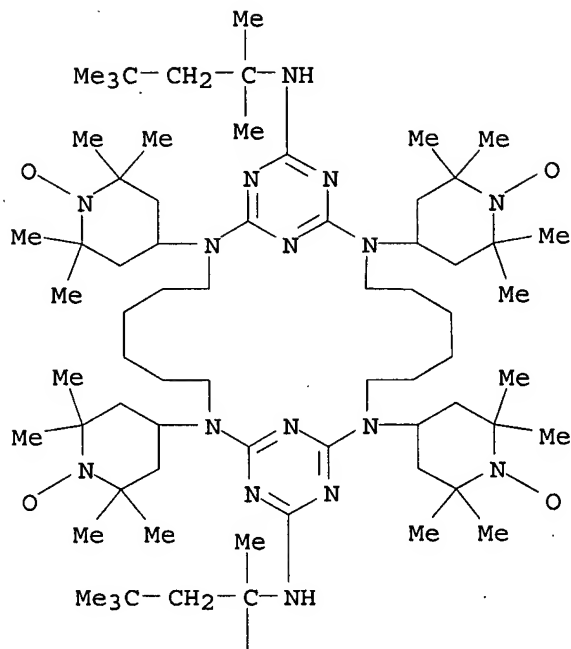
OTHER SOURCE(S): CASREACT 139:323311

AB A new macrocyclic tetrafunctional nitroxyl radical, [Chimassorb 966 radical (I)], developed by Ciba Specialty Chems., is a particularly effective catalyst in combination with Mn(II) and Co(II) or Cu(II) nitrates for the selective oxidation of primary and secondary alcs. to the corresponding aldehydes and ketones by air or O₂ under mild conditions (ambient temperature and pressure) or H₂O₂. A distinctive feature of I is the possibility of easy recovery and recycles, due to its low solubility, particularly as ammonium salt, in most organic solvents, which makes it especially useful for practical applications. In the absence of I or the manganese nitrate/cobalt nitrate couple no substantial oxidation occurs, suggesting that also with hydrogen peroxide, the actual oxidant of the alc. is an oxoammonium salt, which is continuously regenerated by the combination of hydrogen peroxide and the metal salt catalysts.

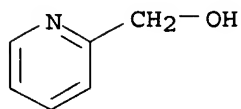
IT 613258-32-5
RL: CAT (Catalyst use); USES (Uses)
(Chimassorb 966 radical; nitroxyl radical (Chimassorb 966 radical) catalyst for selective oxidation of primary and secondary alcs. to aldehydes and ketones by oxygen and hydrogen peroxide under mild conditions)

RN 613258-32-5 HCAPLUS

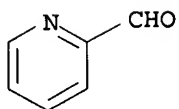
CN 1-Piperidinyloxy, 4,4',4'',4'''-[12,25-bis[(1,1,3,3-tetramethylbutyl)amino]-2,9,11,13,15,22,24,26,27,28-decaazatricyclo[21.3.1.110,14]octacos-1(27),10,12,14(28),23,25-hexaene-2,9,15,22-tetrayl]tetrakis[2,2,6,6-tetramethyl- (9CI) (CA INDEX NAME)



IT 586-98-1, 2-(Hydroxymethyl)pyridine
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (nitroxyl radical (Chimassorb 966 radical) catalyst for selective
 oxidation of primary and secondary alcs. to aldehydes and ketones by
 oxygen and hydrogen peroxide under mild conditions)
 RN 586-98-1 HCAPLUS
 CN 2-Pyridinemethanol (CA INDEX NAME)



IT 1121-60-4P, 2-Pyridinecarboxaldehyde
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (nitroxyl radical (Chimassorb 966 radical) catalyst for selective
 oxidation of primary and secondary alcs. to aldehydes and ketones by
 oxygen and hydrogen peroxide under mild conditions)
 RN 1121-60-4 HCAPLUS
 CN 2-Pyridinecarboxaldehyde (CA INDEX NAME)



REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

18.41

553.77

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-2.34

-2.34

FILE 'REGISTRY' ENTERED AT 16:31:58 ON 11 OCT 2007

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STRUCTURE FILE UPDATES: 10 OCT 2007 HIGHEST RN 950149-06-1

DICTIONARY FILE UPDATES: 10 OCT 2007 HIGHEST RN 950149-06-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

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<http://www.cas.org/support/stngen/stndoc/properties.html>

=> file caold

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.45

554.22

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

0.00

-2.34

FILE 'CAOLD' ENTERED AT 16:32:00 ON 11 OCT 2007

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FILE COVERS 1907-1966

FILE LAST UPDATED: 01 May 1997 (19970501/UP)

Updated Search

This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE display formats.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

=> d his

(FILE 'HOME' ENTERED AT 16:12:38 ON 11 OCT 2007)

FILE 'REGISTRY' ENTERED AT 16:13:27 ON 11 OCT 2007
E UNDECANOL/CN

L1 2 S E3

FILE 'REGISTRY' ENTERED AT 16:21:06 ON 11 OCT 2007

L2 STRUCTURE UPLOADED

L3 9 S L2

L4 STRUCTURE UPLOADED

L5 4 S L4

L6 STRUCTURE UPLOADED

L7 13 S L6

L8 1553 S L6 FULL

FILE 'HCAPLUS' ENTERED AT 16:26:51 ON 11 OCT 2007

L9 1262 S L8/PREP

FILE 'REGISTRY' ENTERED AT 16:27:02 ON 11 OCT 2007

L10 STRUCTURE UPLOADED

L11 50 S L10

L12 3368 S L10 FULL

FILE 'HCAPLUS' ENTERED AT 16:28:36 ON 11 OCT 2007

L13 2593 S L12/RCT

L14 470 S L13 AND L9

FILE 'REGISTRY' ENTERED AT 16:29:01 ON 11 OCT 2007

L15 STRUCTURE UPLOADED

L16 50 S L15

L17 8707 S L15 FULL

FILE 'HCAPLUS' ENTERED AT 16:31:15 ON 11 OCT 2007

L18 10014 S L17

L19 3 S L18 AND L14

FILE 'REGISTRY' ENTERED AT 16:31:58 ON 11 OCT 2007

FILE 'CAOLD' ENTERED AT 16:32:00 ON 11 OCT 2007

=> s l8 and l12 and l17

90 L8

159 L12

82 L17

L20 0 L8 AND L12 AND L17

Updated Search

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.90

555.12

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

0.00

-2.34

FILE 'REGISTRY' ENTERED AT 16:33:28 ON 11 OCT 2007

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STRUCTURE FILE UPDATES: 10 OCT 2007 HIGHEST RN 950149-06-1

DICTIONARY FILE UPDATES: 10 OCT 2007 HIGHEST RN 950149-06-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=>

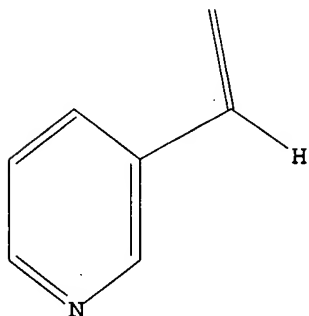
Uploading C:\Documents and Settings\brobinson1\My Documents\stnweb\Queries\asfdasnj.str

L21 STRUCTURE UPLOADED

=> d l21

L21 HAS NO ANSWERS

L21 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l21

Updated Search

SAMPLE SEARCH INITIATED 16:35:08 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 18749 TO ITERATE

10.7% PROCESSED 2000 ITERATIONS 6 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 366781 TO 383179
PROJECTED ANSWERS: 675 TO 1573

L22 6 SEA SSS SAM L21

=> s l22
SAMPLE SEARCH INITIATED 16:35:23 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 18749 TO ITERATE

10.7% PROCESSED 2000 ITERATIONS 6 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 366781 TO 383179
PROJECTED ANSWERS: 675 TO 1573

L23 6 SEA SSS SAM L21

=> s l22 full
THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 171.65 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y
FULL SEARCH INITIATED 16:35:30 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 374947 TO ITERATE

100.0% PROCESSED 374947 ITERATIONS 1936 ANSWERS
SEARCH TIME: 00.00.02

L24 1936 SEA SSS FUL L21

=> file hcaplus		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	173.45	728.57
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-2.34

FILE 'HCAPLUS' ENTERED AT 16:35:35 ON 11 OCT 2007
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FILE COVERS 1907 - 11 Oct 2007 VOL 147 ISS 16
FILE LAST UPDATED: 10 Oct 2007 (20071010/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s l24/prep
      5735 L24
      4473482 PREP/RL
L25      1504 L24/PREP
          (L24 (L) PREP/RL)
```

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	2.60	731.17
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-2.34

FILE 'REGISTRY' ENTERED AT 16:35:41 ON 11 OCT 2007
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STRUCTURE FILE UPDATES: 10 OCT 2007 HIGHEST RN 950149-06-1
DICTIONARY FILE UPDATES: 10 OCT 2007 HIGHEST RN 950149-06-1

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TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

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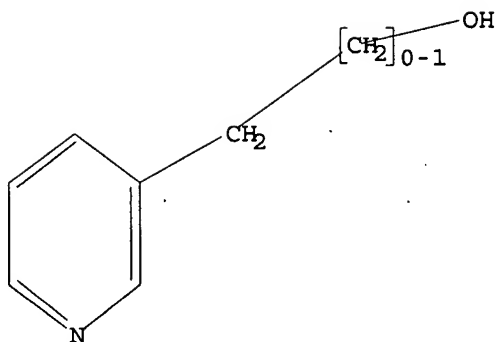
<http://www.cas.org/support/stngen/stndoc/properties.html>

```
=>
Uploading C:\Documents and Settings\brobinson1\My
Documents\stnweb\Queries\asdfdaasnj.str
```

L26 STRUCTURE UPLOADED

```
=> d l26
L26 HAS NO ANSWERS
L26 STR
```

Updated Search



Structure attributes must be viewed using STN Express query preparation.

=> s l26

SAMPLE SEARCH INITIATED 16:36:59 FILE 'REGISTRY'
 SAMPLE SCREEN SEARCH COMPLETED - 19487 TO ITERATE

10.3% PROCESSED 2000 ITERATIONS
 INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
 SEARCH TIME: 00.00.01

32 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
 BATCH **COMPLETE**
 PROJECTED ITERATIONS: 381382 TO 398098
 PROJECTED ANSWERS: 5176 TO 7294

L27 32 SEA SSS SAM L26

=> s l26 full

THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 171.65 U.S. DOLLARS
 DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y
 FULL SEARCH INITIATED 16:37:04 FILE 'REGISTRY'
 FULL SCREEN SEARCH COMPLETED - 390140 TO ITERATE

100.0% PROCESSED 390140 ITERATIONS
 SEARCH TIME: 00.00.02

6553 ANSWERS

L28 6553 SEA SSS FUL L26

=> file hcaplus

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
172.55	903.72

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
0.00	-2.34

CA SUBSCRIBER PRICE

FILE 'HCAPLUS' ENTERED AT 16:37:09 ON 11 OCT 2007
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FILE COVERS 1907 - 11 Oct 2007 VOL 147 ISS 16
FILE LAST UPDATED: 10 Oct 2007 (20071010/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s l28/rct
      13474 L28
      3023813 RCT/RL
L29      2704 L28/RCT
          (L28 (L) RCT/RL)
```

```
=> d his
```

```
(FILE 'HOME' ENTERED AT 16:12:38 ON 11 OCT 2007)
```

```
FILE 'REGISTRY' ENTERED AT 16:13:27 ON 11 OCT 2007
      E UNDECANOL/CN
```

```
L1      2 S E3
```

```
FILE 'REGISTRY' ENTERED AT 16:21:06 ON 11 OCT 2007
```

```
L2      STRUCTURE UPLOADED
```

```
L3      9 S L2
```

```
L4      STRUCTURE UPLOADED
```

```
L5      4 S L4
```

```
L6      STRUCTURE UPLOADED
```

```
L7      13 S L6
```

```
L8      1553 S L6 FULL
```

```
FILE 'HCAPLUS' ENTERED AT 16:26:51 ON 11 OCT 2007
```

```
L9      1262 S L8/PREP
```

```
FILE 'REGISTRY' ENTERED AT 16:27:02 ON 11 OCT 2007
```

```
L10     STRUCTURE UPLOADED
```

```
L11     50 S L10
```

```
L12     3368 S L10 FULL
```

```
FILE 'HCAPLUS' ENTERED AT 16:28:36 ON 11 OCT 2007
```

```
L13     2593 S L12/RCT
```

```
L14     470 S L13 AND L9
```

```
FILE 'REGISTRY' ENTERED AT 16:29:01 ON 11 OCT 2007
```

```
L15     STRUCTURE UPLOADED
```

```
L16     50 S L15
```

```
L17     8707 S L15 FULL
```

```
FILE 'HCAPLUS' ENTERED AT 16:31:15 ON 11 OCT 2007
```

```
L18     10014 S L17
```

```
L19     3 S L18 AND L14
```

Updated Search

FILE 'REGISTRY' ENTERED AT 16:31:58 ON 11 OCT 2007

FILE 'CAOLD' ENTERED AT 16:32:00 ON 11 OCT 2007

L20 0 S L8 AND L12 AND L17

FILE 'REGISTRY' ENTERED AT 16:33:28 ON 11 OCT 2007

L21 STRUCTURE UPLOADED

L22 6 S L21

L23 6 S L22

L24 1936 S L22 FULL

FILE 'HCAPLUS' ENTERED AT 16:35:35 ON 11 OCT 2007

L25 1504 S L24/PREP

FILE 'REGISTRY' ENTERED AT 16:35:41 ON 11 OCT 2007

L26 STRUCTURE UPLOADED

L27 32 S L26

L28 6553 S L26 FULL

FILE 'HCAPLUS' ENTERED AT 16:37:09 ON 11 OCT 2007

L29 2704 S L28/RCT

=> s l29 and l25

L30 451 L29 AND L25

=> s l24 and l30

5735 L24

L31 451 L24 AND L30

=> s l30 and l17

10014 L17

L32 16 L30 AND L17

=> s l32 and shiomi, y?/a

SAVED ANSWER SET NAME MAY NOT BE USED IN QUERIES 'Y?/A'

Saved answer sets must be activated before they are used in search profiles. This must be done in the same file in which they were created. Use the FILE command to change files if necessary, then enter "ACTIVATE" followed by the saved name (including /A) at an arrow prompt (=>). Use the L# assigned to the answer set in your search profile.

=> s l32 and shiomi, y?/au

228 SHIOMI, Y?/AU

L33 1 L32 AND SHIOMI, Y?/AU

=> d l33, ibib abs hitstr, 1

L33 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:777759 HCAPLUS

DOCUMENT NUMBER: 139:276804

TITLE: Process for producing heterocyclic aldehyde

INVENTOR(S): Shiomi, Yasuhiro; Uno, Osamu; Ohta, Akio;

Sunakami, Takeshi

PATENT ASSIGNEE(S): Koei Chemical Co., Ltd., Japan

SOURCE: PCT Int. Appl., 48 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

Updated Search

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003080575	A1	20031002	WO 2003-JP3568	20030325
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003221048	A1	20031008	AU 2003-221048	20030325
GB 2404190	A	20050126	GB 2004-21452	20030325
US 2005124807	A1	20050609	US 2003-509228	20030325
PRIORITY APPLN. INFO.:			JP 2002-86974	A 20020326
			WO 2003-JP3568	W 20030325

OTHER SOURCE(S): MARPAT 139:276804

AB The patent relates to a process in which a heterocyclic alc. is oxidized to produce a heterocyclic aldehyde with high selectivity in high yield. The process comprises reacting a heterocyclic compound having per mol. at least one hydroxymethyl group bonded to a carbon atom of the heterocycle with a hypohalogenous acid salt in the presence of a base to oxidize the hydroxymethyl group to thereby produce the corresponding heterocyclic aldehyde, wherein the reaction is conducted in the presence of a 2,2,6,6-tetramethylpiperidin-1-oxyl derivative having per mol. two or more 2,2,6,6-tetramethylpiperidin-1-oxyl-4-yl groups. Thus, 3-pyridine-methanol was oxidized by sodium hypochlorite in presence of an oligomer derivative obtained from Chimassorb 944LD with hydrogen peroxide and generated 3-pyridinecarbaldehyde (90.1%) and nicotinic acid (3.4%).

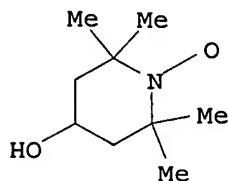
IT 2226-96-2DP, 4-Hydroxy-2,2,6,6-tetramethylpiperidine-N-oxyl, reaction product with poly(2-isocyanatoethyl methacrylate)

RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(in preparation of heterocyclic aldehyde)

RN 2226-96-2 HCAPLUS

CN 1-Piperidinyloxy, 4-hydroxy-2,2,6,6-tetramethyl- (CA INDEX NAME)



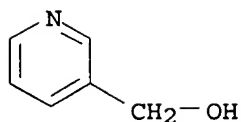
IT 100-55-0, 3-Pyridine-methanol 34107-46-5, 6-Methyl-3-pyridine-methanol

RL: RCT (Reactant); RACT (Reactant or reagent)

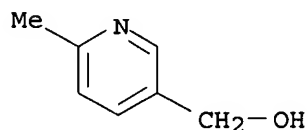
(in preparation of heterocyclic aldehyde)

RN 100-55-0 HCAPLUS

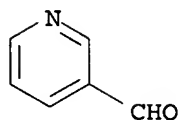
CN 3-Pyridinemethanol (CA INDEX NAME)



RN 34107-46-5 HCAPLUS
 CN 3-Pyridinemethanol, 6-methyl- (CA INDEX NAME)



IT 500-22-1P, 3-Pyridinecarbaldehyde
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of heterocyclic aldehyde)
 RN 500-22-1 HCAPLUS
 CN 3-Pyridinecarboxaldehyde (CA INDEX NAME)



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d his

(FILE 'HOME' ENTERED AT 16:12:38 ON 11 OCT 2007)

FILE 'REGISTRY' ENTERED AT 16:13:27 ON 11 OCT 2007
 E UNDECANOL/CN

L1 2 S E3

FILE 'REGISTRY' ENTERED AT 16:21:06 ON 11 OCT 2007

L2 STRUCTURE UPLOADED

L3 9 S L2

L4 STRUCTURE UPLOADED

L5 4 S L4

L6 STRUCTURE UPLOADED

L7 13 S L6

L8 1553 S L6 FULL

FILE 'HCAPLUS' ENTERED AT 16:26:51 ON 11 OCT 2007

L9 1262 S L8/PREP

FILE 'REGISTRY' ENTERED AT 16:27:02 ON 11 OCT 2007

L10 STRUCTURE UPLOADED

L11 50 S L10

L12 3368 S L10 FULL

FILE 'HCAPLUS' ENTERED AT 16:28:36 ON 11 OCT 2007

Updated Search

L13 2593 S L12/RCT
 L14 470 S L13 AND L9

 FILE 'REGISTRY' ENTERED AT 16:29:01 ON 11 OCT 2007
 L15 STRUCTURE UPLOADED
 L16 50 S L15
 L17 8707 S L15 FULL

 FILE 'HCAPLUS' ENTERED AT 16:31:15 ON 11 OCT 2007
 L18 10014 S L17
 L19 3 S L18 AND L14

 FILE 'REGISTRY' ENTERED AT 16:31:58 ON 11 OCT 2007

 FILE 'CAOLD' ENTERED AT 16:32:00 ON 11 OCT 2007
 L20 0 S L8 AND L12 AND L17

 FILE 'REGISTRY' ENTERED AT 16:33:28 ON 11 OCT 2007
 L21 STRUCTURE UPLOADED
 L22 6 S L21
 L23 6 S L22
 L24 1936 S L22 FULL

 FILE 'HCAPLUS' ENTERED AT 16:35:35 ON 11 OCT 2007
 L25 1504 S L24/PREP

 FILE 'REGISTRY' ENTERED AT 16:35:41 ON 11 OCT 2007
 L26 STRUCTURE UPLOADED
 L27 32 S L26
 L28 6553 S L26 FULL

 FILE 'HCAPLUS' ENTERED AT 16:37:09 ON 11 OCT 2007
 L29 2704 S L28/RCT
 L30 451 S L29 AND L25
 L31 451 S L24 AND L30
 L32 16 S L30 AND L17
 L33 1 S L32 AND SHIOMI, Y?/AU

 => s l32 and uno, o?/au
 37 UNO, O?/AU
 L34 1 L32 AND UNO, O?/AU

 => s l34 not l33
 L35 0 L34 NOT L33

 => s l32 not l33
 L36 15 L32 NOT L33

 => s l36 and ohta, a?/au
 930 OHTA, A?/AU
 L37 0 L36 AND OHTA, A?/AU

 => s l36 and sunakami, t?/au
 2 SUNAKAMI, T?/AU
 L38 0 L36 AND SUNAKAMI, T?/AU

 => d l36, ibib abs hitstr, 1-15

 L36 ANSWER 1 OF 15 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2007:440534 HCAPLUS
 DOCUMENT NUMBER: 147:72448

Updated Search

TITLE: Efficient NO equivalent for activation of molecular oxygen and its applications in transition-metal-free catalytic aerobic alcohol oxidation

AUTHOR(S): Xie, Yi; Mo, Weimin; Xu, Dong; Shen, Zhenlu; Sun, Nan; Hu, Baoxiang; Hu, Xinquan

CORPORATE SOURCE: College of Chemical Engineering and Material Sciences, Zhejiang University of Technology, Hangzhou, 310014, Peop. Rep. China

SOURCE: Journal of Organic Chemistry (2007), 72(11), 4288-4291
CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 147:72448

AB Tert-Bu nitrite (TBN) was identified as an efficient NO equivalent for the activation of mol. oxygen. The unique property of TBN enabled TEMPO-catalyzed aerobic alc. oxidation to be performed in high-volume efficiency. Up to a 16,000 turnover number was achieved in this transition-metal-free aerobic catalytic system. Under the optimal reaction conditions, various alcs. were converted into their corresponding carbonyl compds. with TEMPO/HBr/TBN as catalyst. The newly developed method was suitable for the oxidation of solid substrate alcs. with high m.p. and/or low solubility under the help of min. solvent to form a slurry.

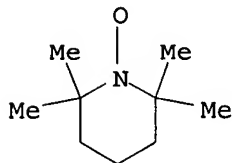
IT 2564-83-2, TEMPO

RL: CAT (Catalyst use); USES (Uses)

(tert-Bu nitrite as nitric oxide equivalent in aerobic alc. oxidation using tetramethylpiperidyl-oxy-hydrogen bromide-tert-Bu nitrite catalyst system)

RN 2564-83-2 HCAPLUS

CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



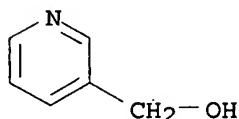
IT 100-55-0, 3-Pyridinemethanol

RL: RCT (Reactant); RACT (Reactant or reagent)

(tert-Bu nitrite as nitric oxide equivalent in aerobic alc. oxidation using tetramethylpiperidyl-oxy-hydrogen bromide-tert-Bu nitrite catalyst system)

RN 100-55-0 HCAPLUS

CN 3-Pyridinemethanol (CA INDEX NAME)

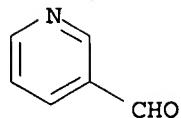


IT 500-22-1P, 3-Pyridinecarboxaldehyde

RL: SPN (Synthetic preparation); PREP (Preparation)

(tert-Bu nitrite as nitric oxide equivalent in aerobic alc. oxidation using tetramethylpiperidyl-oxy-hydrogen bromide-tert-Bu nitrite catalyst system)

RN 500-22-1 HCAPLUS
CN 3-Pyridinecarboxaldehyde (CA INDEX NAME)



REFERENCE COUNT: 68 THERE ARE 68 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 2 OF 15 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:1187826 HCAPLUS

DOCUMENT NUMBER: 146:121623

TITLE: Multipolymer reaction system for selective aerobic alcohol oxidation: simultaneous use of multiple different polymer-supported ligands

AUTHOR(S): Chung, Cecilia Wan Ying; Toy, Patrick H.

CORPORATE SOURCE: Department of Chemistry, The University of Hong Kong, Hong Kong, Peop. Rep. China

SOURCE: Journal of Combinatorial Chemistry (2007), 9(1), 115-120

CODEN: JCCHFF; ISSN: 1520-4766

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A multipolymer reaction system has been developed in which a water-soluble polymer-supported 2,2'-bipyridine group and a similarly immobilized TEMPO derivative are used as ligands for copper to effect the mild and selective aerobic oxidation of primary alcs. in acetonitrile-water solvent. In this reaction system, poly(ethylene glycol) monomethyl ether (mol. weight = 5000 Da) was used as the support for both the 2,2'-bipyridine and TEMPO moieties because of its solubility properties. The use of these functionalized polymers simultaneously in catalytic quantities allows for primary alcs. to be oxidized selectively to the corresponding aldehydes in an environmentally friendly manner. This is the first reported example of using two different polymer-supported ligands together to form an organometallic species capable of catalyzing an organic reaction.

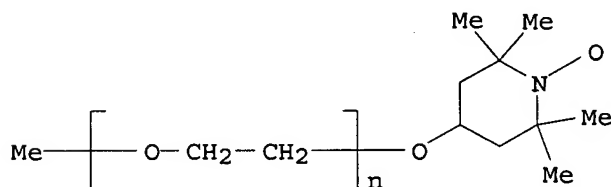
IT 848328-35-8P, 4-Hydroxy-TEMPO

RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(aerobic oxidation of alcs. to aldehydes using copper-polymer-supported bipyridine and polymer-supported TEMPO catalyst)

RN 848328-35-8 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -methyl- ω -[(2,2,6,6-tetramethyl-1-oxy-4-piperidinyloxy]- (9CI) (CA INDEX NAME)



IT 100-55-0, 3-Pyridinemethanol 2226-96-2, 4-Hydroxy-TEMPO

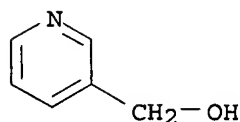
RL: RCT (Reactant); RACT (Reactant or reagent)

Updated Search

(aerobic oxidation of alcs. to aldehydes using copper-polymer-supported bipyridine and polymer-supported TEMPO catalyst)

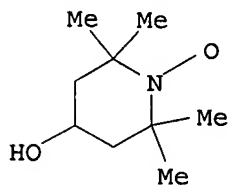
RN 100-55-0 HCAPLUS

CN 3-Pyridinemethanol (CA INDEX NAME)



RN 2226-96-2 HCAPLUS

CN 1-Piperidinyloxy, 4-hydroxy-2,2,6,6-tetramethyl- (CA INDEX NAME)



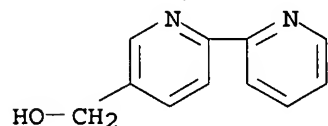
IT 146581-87-5P, 2,2'-Bipyridine-5-methanol

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(aerobic oxidation of alcs. to aldehydes using copper-polymer-supported bipyridine and polymer-supported TEMPO catalyst)

RN 146581-87-5 HCAPLUS

CN [2,2'-Bipyridine]-5-methanol (9CI) (CA INDEX NAME)



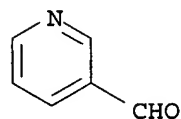
IT 500-22-1P, Nicotinaldehyde

RL: SPN (Synthetic preparation); PREP (Preparation)

(aerobic oxidation of alcs. to aldehydes using copper-polymer-supported bipyridine and polymer-supported TEMPO catalyst)

RN 500-22-1 HCAPLUS

CN 3-Pyridinecarboxaldehyde (CA INDEX NAME)



REFERENCE COUNT:

93

THERE ARE 93 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 3 OF 15 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:669406 HCAPLUS

Updated Search

DOCUMENT NUMBER: 145:166657
 TITLE: Process for preparation of aldehydes and ketones from alcohols by oxidation with air
 INVENTOR(S): Liu, Renhua; Hu, Xinquan; Dong, Chunyan; Liang, Xinmiao
 PATENT ASSIGNEE(S): Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Peop. Rep. China
 SOURCE: Faming Zhuanli Shengqing Gongkai Shuomingshu, 9 pp. CODEN: CNXXEV
 DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

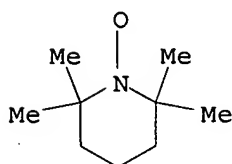
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1796349	A	20060705	CN 2004-10101893	20041230
PRIORITY APPLN. INFO.:			CN 2004-10101893	20041230

OTHER SOURCE(S): CASREACT 145:166657

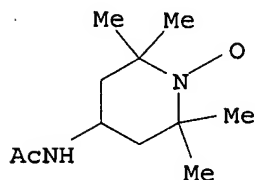
AB The method comprises oxidizing alc. with air in the presence of 0.2 mol% TEMPO free radical or its derivative, 4-10 mol% active bromine (1,3-dibromo-5,5-dimethylhydantoin, N-bromosuccinimide, or pyridinium tribromide) and 4-10 mol% nitrite (sodium nitrite or potassium nitrite) in 1-5 mL water and 100 mL dichloromethane at 100°C and 0.4-0.9 Mpa for 1-10 h. The alc. can be benzyl alc., 4-methylbenzyl alc., 3-methylbenzyl alc., 2-methylbenzyl alc., 4-chlorobenzyl alc., 3-chlorobenzyl alc., 2-chlorobenzyl alc., α -methylbenzyl alc., 3-pyridinemethanol, 2-thiophenemethanol, cyclohexanol, octanol, or menthol.

IT 2564-83-2, 2,2,6,6-Tetramethylpiperidine N-oxy 14691-89-5
 54052-87-8
 RL: CAT (Catalyst use); USES (Uses)
 (preparation of aldehydes and ketones from alcs. by oxidation with air)

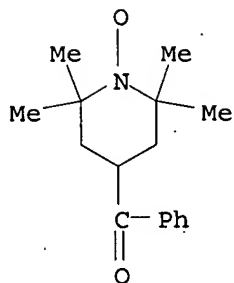
RN 2564-83-2 HCAPLUS
 CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



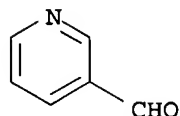
RN 14691-89-5 HCAPLUS
 CN 1-Piperidinyloxy, 4-(acetylamino)-2,2,6,6-tetramethyl- (CA INDEX NAME)



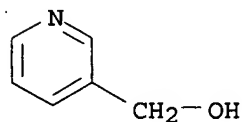
RN 54052-87-8 HCAPLUS
 CN 1-Piperidinyloxy, 4-benzoyl-2,2,6,6-tetramethyl- (9CI) (CA INDEX NAME)



IT 500-22-1P, 3-Pyridylaldehyde
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP
 (Preparation)
 (preparation of aldehydes and ketones from alcs. by oxidation with air)
 RN 500-22-1 HCAPLUS
 CN 3-Pyridinecarboxaldehyde (CA INDEX NAME)



IT 100-55-0, 3-Pyridinemethanol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of aldehydes and ketones from alcs. by oxidation with air)
 RN 100-55-0 HCAPLUS
 CN 3-Pyridinemethanol (CA INDEX NAME)



L36 ANSWER 4 OF 15 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2006:624725 HCAPLUS
 DOCUMENT NUMBER: 145:124320
 TITLE: Process for preparation of aromatic aldehydes and
 ketones by catalytic oxidation in aqueous solution
 INVENTOR(S): Hu, Xinquan; Liu, Renhua; Dong, Chunyan; Liang,
 Xinmiao
 PATENT ASSIGNEE(S): Dalian Institute of Chemical Physics, Chinese Academy
 of Sciences, Peop. Rep. China
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 10 pp.
 CODEN: CNXXEV
 DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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CN 1789225	A	20060621	CN 2004-10098936	20041216

PRIORITY APPLN. INFO.:

CN 2004-10098936

20041216

OTHER SOURCE(S):

CASREACT 145:124320

AB The invention pertains to a method for catalytically oxidizing arylmethanol to aryl aldehyde or ketone by air at 40-120 °C for 1.5-16 h at 0.1-1.2 MPa, in which 2,2,6,6-tetramethylpiperidiny-1-oxy (TEMPO) or its derivs., nitrites e.g. sodium nitrite or potassium nitrite, and active bromide to produce hypobromous acid in situ e.g. 1,3-dibromo-5,5-dimethyl-hydantoin, N-bromosuccinimide, pyridinium tribromide etc. at a molar ratio of 1:2-4:4 are used as catalysts. The molar ratio of TEMPO or its derivative and arylmethanol is about 1:100.

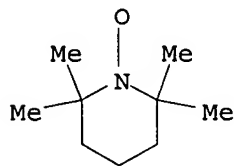
IT 2564-83-2, 2,2,6,6-Tetramethylpiperidiny-1-oxy 14691-89-5
, 4-(Acetylamino)-2,2,6,6-tetramethylpiperidiny-1-oxy 54052-87-8
, 4-Benzoyl-2,2,6,6-tetramethylpiperidiny-1-oxy

RL: CAT (Catalyst use); USES (Uses)

(preparation of aromatic aldehydes and ketones by catalytic oxidation in aqueous solution)

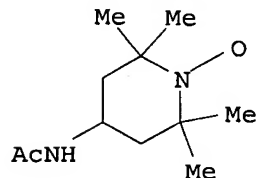
RN 2564-83-2 HCAPLUS

CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



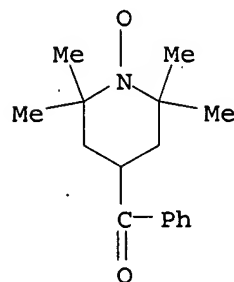
RN 14691-89-5 HCAPLUS

CN 1-Piperidinyloxy, 4-(acetylamino)-2,2,6,6-tetramethyl- (CA INDEX NAME)



RN 54052-87-8 HCAPLUS

CN 1-Piperidinyloxy, 4-benzoyl-2,2,6,6-tetramethyl- (9CI) (CA INDEX NAME)



IT 500-22-1P, 3-Pyridylaldehyde

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

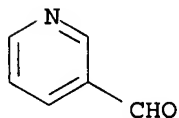
Updated Search

(preparation of aromatic aldehydes and ketones by catalytic oxidation in aqueous

solution)

RN 500-22-1 HCAPLUS

CN 3-Pyridinecarboxaldehyde (CA INDEX NAME)



IT 100-55-0, 3-Pyridylmethanol

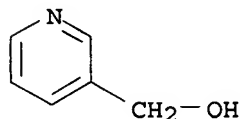
RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of aromatic aldehydes and ketones by catalytic oxidation in aqueous

solution)

RN 100-55-0 HCAPLUS

CN 3-Pyridinemethanol (CA INDEX NAME)



L36 ANSWER 5 OF 15 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:284083 HCAPLUS

DOCUMENT NUMBER: 145:7498

TITLE: Catalyst system and method for preparation of aldehyde and ketone from alcohol

INVENTOR(S): Liu, Renhua; Hu, Xinquan; Dong, Chunyan; Liang, Xinmiao

PATENT ASSIGNEE(S): Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Peop. Rep. China

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 12 pp. CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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CN 1651381	A	20050810	CN 2004-10003791	20040205

PRIORITY APPLN. INFO.: CN 2004-10003791 20040205

OTHER SOURCE(S): CASREACT 145:7498

AB This invention pertains to catalyst system for preparing aldehyde and ketone from alc., and the catalyst system comprises oxidizing agent and catalyst of 2,2,6,6-tetramethyl-1-piperidinyloxy, halogen, and nitrite. The 2,2,6,6-tetra-Me piperidine-oxo free radical is 4-benzoyl-2,2,6,6-tetramethylpiperidinyloxy, or 4-acetylamino-2,2,6,6-tetramethylpiperidinyloxy. The method for preparing aldehyde and ketone from alc. comprises mixing alc. and catalyst system and reacting at 40-120°C and 0.1-1.0MPa for 0.5-8 h. The alc. is primary alc. of substituted benzyl alc., fatty primary alc. and/or N, S heteroaryl substituted methanol; secondary alc. of aryl substituted secondary alc.,

fatty secondary alc. or/and alicyclic alc.

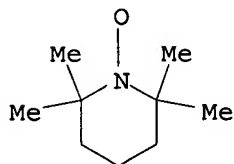
IT 2564-83-2, Tempo 14691-89-5 54052-87-8

RL: CAT (Catalyst use); USES (Uses)

(preparation of aldehyde and ketone by oxidation of alc. in presence of
TEMPO,
nitrite, and halogen)

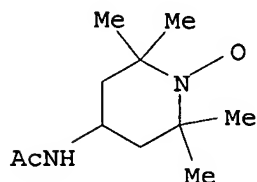
RN 2564-83-2 HCAPLUS

CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



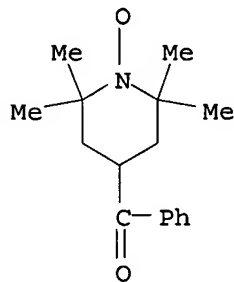
RN 14691-89-5 HCAPLUS

CN 1-Piperidinyloxy, 4-(acetylamino)-2,2,6,6-tetramethyl- (CA INDEX NAME)



RN 54052-87-8 HCAPLUS

CN 1-Piperidinyloxy, 4-benzoyl-2,2,6,6-tetramethyl- (9CI) (CA INDEX NAME)



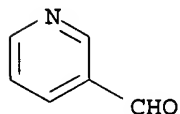
IT 500-22-1P, 3-Pyridinecarboxaldehyde

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP
(Preparation)

(preparation of aldehyde and ketone by oxidation of alc. in presence of
TEMPO,
nitrite, and halogen)

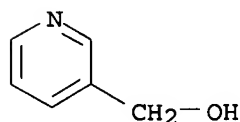
RN 500-22-1 HCAPLUS

CN 3-Pyridinecarboxaldehyde (CA INDEX NAME)

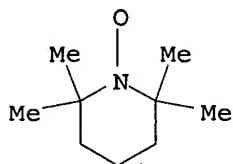


Updated Search

IT 100-55-0, 3-Pyridinemethanol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of aldehyde and ketone by oxidation of alc. in presence of
 TEMPO,
 nitrite, and halogen)
 RN 100-55-0 HCAPLUS
 CN 3-Pyridinemethanol (CA INDEX NAME)

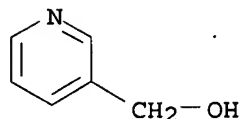


L36 ANSWER 6 OF 15 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2004:1148813 HCAPLUS
 DOCUMENT NUMBER: 142:74314
 TITLE: Highly Efficient Catalytic Aerobic Oxidations of
 Benzylic Alcohols in Water
 AUTHOR(S): Liu, Renhua; Dong, Chunyan; Liang, Xinmiao; Wang,
 Xiujuan; Hu, Xinquan
 CORPORATE SOURCE: Dalian Institute of Chemical Physics, the Chinese
 Academy of Sciences, Dalian, 116023, Peop. Rep. China
 SOURCE: Journal of Organic Chemistry (2005), 70(2), 729-731
 CODEN: JOCEAH; ISSN: 0022-3263
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 142:74314
 AB A highly efficient catalytic system without transition metals in water has
 been developed for aerobic oxidns. of benzylic alcs. The newly developed
 catalyst system oxidized benzylic alcs. and heteroarom. analogs with 1 mol
 % TEMPO as a catalyst and with a catalytic amount of 1,3-dibromo-5,5-
 dimethylhydantoin and NaNO₂ as cocatalysts. Under the optimal conditions,
 various alcs. were converted into their corresponding aldehydes or ketones
 in high yields.
 IT 2564-83-2, TEMPO
 RL: CAT (Catalyst use); USES (Uses)
 (preparation of carbonyl compound via catalytic aerobic oxidation of alcs.
 with TEMPO in water)
 RN 2564-83-2 HCAPLUS
 CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)

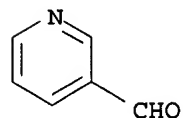


IT 100-55-0, 3-Pyridinemethanol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of carbonyl compound via catalytic aerobic oxidation of alcs.
 with TEMPO in water)

RN 100-55-0 HCAPLUS
CN 3-Pyridinemethanol (CA INDEX NAME)

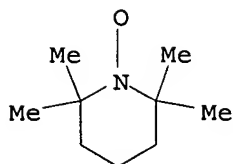


IT 500-22-1P, 3-Pyridinecarboxaldehyde
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of carbonyl compound via catalytic aerobic oxidation of alcs.
with TEMPO in water)
RN 500-22-1 HCAPLUS
CN 3-Pyridinecarboxaldehyde (CA INDEX NAME)

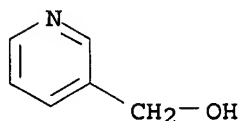


REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

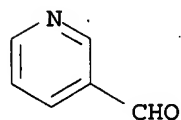
L36 ANSWER 7 OF 15 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:199180 HCAPLUS
DOCUMENT NUMBER: 140:391051
TITLE: Transition-Metal-Free: A Highly Efficient Catalytic
Aerobic Alcohol Oxidation Process
AUTHOR(S): Liu, Renhua; Liang, Xinmiao; Dong, Chunyan; Hu,
Xinquan
CORPORATE SOURCE: Dalian Institute of Chemical Physics, Chinese Academy
of Sciences, Dalian, 116023, Peop. Rep. China
SOURCE: Journal of the American Chemical Society (2004),
126(13), 4112-4113
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 140:391051
AB A highly efficient catalytic system without transition metals has been
developed for aerobic alc. oxidns. Under the optimal reaction conditions,
various alc. substrates were converted into their corresponding carbonyl
compds. by air with TEMPO/Br2/NaNO2 as catalyst.
IT 2564-83-2, TEMPO
RL: CAT (Catalyst use); USES (Uses)
(preparation of aldehydes and ketones via transition metal free aerobic
oxidation of alcs. catalyzed by TEMPO/Br2/NaNO2)
RN 2564-83-2 HCAPLUS
CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



IT 100-55-0, 3-Pyridinemethanol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of aldehydes and ketones via transition metal free aerobic
 oxidation of alcs. catalyzed by TEMPO/Br₂/NaNO₂)
 RN 100-55-0 HCAPLUS
 CN 3-Pyridinemethanol (CA INDEX NAME)



IT 500-22-1P, 3-Pyridinecarboxaldehyde
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of aldehydes and ketones via transition metal free aerobic
 oxidation of alcs. catalyzed by TEMPO/Br₂/NaNO₂)
 RN 500-22-1 HCAPLUS
 CN 3-Pyridinecarboxaldehyde (CA INDEX NAME)



REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 8 OF 15 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:13470 HCAPLUS

DOCUMENT NUMBER: 138:204504

TITLE: Iodine as a Chemoselective Reoxidant of TEMPO:
 Application to the Oxidation of Alcohols to Aldehydes
 and Ketones

AUTHOR(S): Miller, Ross A.; Hoerrner, R. Scott

CORPORATE SOURCE: Merck Research Laboratories, Rahway, NJ, 07065, USA

SOURCE: Organic Letters (2003), 5(3), 285-287

CODEN: ORLEF7; ISSN: 1523-7060

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

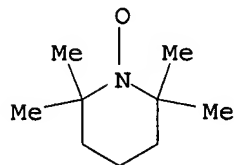
LANGUAGE: English

OTHER SOURCE(S): CASREACT 138:204504

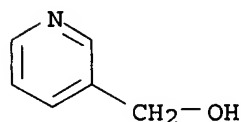
AB Chemoselective alc. oxidns. using catalytic TEMPO and stoichiometric
 iodine as the terminal oxidant were studied. Iodine was compared to other
 pos. halogens as the terminal oxidant and shown to be superior in cases of
 electron-rich and heteroarom. rings. The new conditions were successfully
 applied to the oxidation of 2-butyl-5-chloro-4-imidazolemethanol to its
 aldehyde derivative, which is an important intermediate in the synthesis of
 losartan.

Updated Search

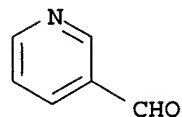
IT 2564-83-2, TEMPO
 RL: CAT (Catalyst use); USES (Uses)
 (chemoselective oxidation of alcs. to carbonyl compds. using catalytic
 TEMPO and stoichiometric amts. of iodine)
 RN 2564-83-2 HCAPLUS
 CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



IT 100-55-0, 3-Pyridinemethanol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (chemoselective oxidation of alcs. to carbonyl compds. using catalytic
 TEMPO and stoichiometric amts. of iodine)
 RN 100-55-0 HCAPLUS
 CN 3-Pyridinemethanol (CA INDEX NAME)



IT 500-22-1P, 3-Pyridinecarboxaldehyde
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (chemoselective oxidation of alcs. to carbonyl compds. using catalytic
 TEMPO and stoichiometric amts. of iodine)
 RN 500-22-1 HCAPLUS
 CN 3-Pyridinecarboxaldehyde (CA INDEX NAME)



REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 9 OF 15 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2002:658068 HCAPLUS
 DOCUMENT NUMBER: 137:201293
 TITLE: Method of synthesizing camptothecin-relating compounds
 INVENTOR(S): Ogawa, Takanori; Nishiyama, Hiroyuki; Uchida, Miyuki;
 Sawada, Seigo
 PATENT ASSIGNEE(S): Kabushiki Kaisha Yakult Honsha, Japan
 SOURCE: PCT Int. Appl., 89 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

Updated Search

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002066416	A1	20020829	WO 2002-JP1538	20020221
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
TW 245768	B	20051221	TW 2002-91102967	20020220
CA 2437702	A1	20020829	CA 2002-2437702	20020221
AU 2002237527	A1	20020904	AU 2002-237527	20020221
AU 2002237527	B2	20070104		
EE 200300373	A	20031015	EE 2003-373	20020221
HU 2003002755	A2	20031229	HU 2003-2755	20020221
EP 1378505	A1	20040107	EP 2002-703874	20020221
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
CN 1492851	A	20040428	CN 2002-805323	20020221
NZ 527615	A	20041224	NZ 2002-527615	20020221
IN 2003MN00709	A	20050429	IN 2003-MN709	20030718
BG 108031	A	20050430	BG 2003-108031	20030725
ZA 2003006223	A	20040603	ZA 2003-6223	20030812
NO 2003003579	A	20031010	NO 2003-3579	20030813
NZ 534374	A	20041224	NZ 2003-534374	20030814
MX 2003PA07528	A	20031211	MX 2003-PA7528	20030821
US 2004106830	A1	20040603	US 2003-467987	20031218
US 7126000	B2	20061024		
US 2007010674	A1	20070111	US 2006-517621	20060908
IN 2007MN00911	A	20070803	IN 2007-MN911	20070615
PRIORITY APPLN. INFO.:				
			JP 2001-45430	A 20010221
			JP 2001-309322	A 20011005
			JP 2001-309332	A 20011005
			WO 2002-JP1538	W 20020221
			IN 2003-MN709	A3 20030718
			US 2003-467987	A3 20031218
OTHER SOURCE(S): CASREACT 137:201293; MARPAT 137:201293				
GI				

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB 2'-Amino-5'-hydroxypropiofenone (I) corresponding to the AB cycle moiety of the camptothecin (CPT) skeleton and a tricyclic ketone, namely (S)-4-ethyl-7,8-dihydro-4-hydroxy-1H-pyrano[3,4-f]indolizine-3,6,10(4H)-trione (II) corresponding to the CDE cycle moiety thereof can be efficiently produced and thus CPT and its derivs. can be stably supplied by a practically usable total synthesis to more efficiently provide camptothecin (CPT), which is a starting compound for irinotecan hydrochloride, namely 7-ethyl-10-[4-(1-piperidino)-1-piperidino]carbonyloxycamptothecin hydrochloride trihydrate, and various camptothecin derivs. Thus, benzylation of 2-nitro-5-hydroxybenzaldehyde by benzyl chloride in the presence of K₂CO₃ in DMF at 60° for 20 h gave 94% 5-benzyloxy-2-nitrobenzaldehyde which went addition reaction with vinylmagnesium bromide in THF at 3-10° for 1 h to give 84.0%

1-(5-benzyloxy-2-nitrophenyl)-2-propen-1-ol (VIII). Oxidation of VIII with MnO₂ in CHCl₃ at 25° for 15 h gave 91% 1-(5-benzyloxy-2-nitrophenyl)-1-oxo-2-propene which was hydrogenated over 10% Pd-C in EtOAc under H atmospheric for 13 h to give 81% I. K₂OsO₄·2H₂O and (DHQD)2PYR were added to an aqueous solution of K₃Fe(CN)₆, K₂CO₃, and MeSO₂NH₂ and stirred at .apprx.5° for 1 h, followed by adding 4-ethyl-8-methoxy-6-(trimethylsilyl)-1H-pyrano[3,4-c]pyridine, and the resulting mixture was stirred at 5° for 20 h, treated with sodium sulfite, and stirred at 5° for 30 min for asym. dihydroxylation to give a diol (III) (95%) which was oxidized by iodine and K₂CO₃ in aqueous methanol at 40° for 48 h to give a lactone (IV; R = TMS) (88%). Iodination of IV (R = TMS) by iodine and CF₃CO₂Ag in CH₂Cl₂ at room temperature for 16.5 h gave IV (R = iodo) (97%) which underwent carbonylation by CO in the presence of Pd(OAc)₂ and K₂CO₃ in 1-propanol at 60° for 18 to give an ester IV (R = n-PrO₂C) (70%). Demethylation of IV (R = n-PrO₂C) by treatment with Me₃SiCl and NaI in MeCN at room temperature for 3 h gave a keto lactone, namely 4-ethyl-3,4,7,8-tetrahydro-4-hydroxy-3,8-dioxo-1H-pyrano[3,4-c]pyridine-6-carboxylic acid Pr ester (V) (95%) which was cyclocondensed with tert-Bu acrylate in the presence of K₂CO₃ in DMSO at 50° for 20 min to give a tricyclic compound (VI) (77%). VI was heated with a mixture of CF₃CO₂H and PhMe at 110° for 100 min to give 77% II which was cyclocondensed with I in a 1:1 mixture of AcOH and toluene in the presence of p-toluenesulfonic acid monohydrate at 100° for 18 h to give SN-38 (VII; R₁ = H). VII (R₁ = H) was converted into irinotecan hydrochloride, VII.HCl (R₁ = Q).

IT 2564-83-2, TEMPO

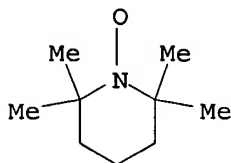
RL: RGT (Reagent); RACT (Reactant or reagent)

(oxidation by; preparation of camptothecin-relating compds. such as irinotecan

hydrochloride and intermediates thereof)

RN 2564-83-2 HCAPLUS

CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



IT 174092-75-2P, 4-Iodo-2-methoxy-6-trimethylsilyl-3-

pyridinecarboxaldehyde 375346-05-7P 453518-21-3P,

2-Methoxy-6-trimethylsilyl-3-pyridinecarboxaldehyde

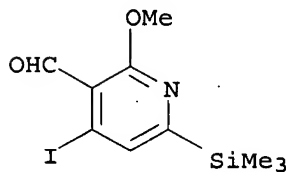
RL: RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)

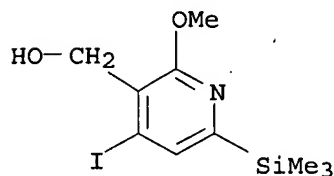
(preparation of camptothecin-relating compds. such as irinotecan hydrochloride and intermediates thereof)

RN 174092-75-2 HCAPLUS

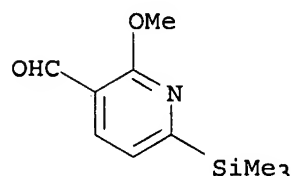
CN 3-Pyridinecarboxaldehyde, 4-iodo-2-methoxy-6-(trimethylsilyl)- (CA INDEX NAME)



RN 375346-05-7 HCAPLUS
CN 3-Pyridinemethanol, 4-iodo-2-methoxy-6-(trimethylsilyl)- (CA INDEX NAME)



RN 453518-21-3 HCAPLUS
CN 3-Pyridinecarboxaldehyde, 2-methoxy-6-(trimethylsilyl)- (CA INDEX NAME)



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 10 OF 15 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:269416 HCAPLUS

DOCUMENT NUMBER: 137:5763

TITLE: TEMPO-Catalyzed Aerobic Oxidation of Alcohols to Aldehydes and Ketones in Ionic Liquid [bmim][PF6]

AUTHOR(S): Ansari, Imtiaz A.; Gree, Rene

CORPORATE SOURCE: Laboratoire de Syntheses et Activations de Biomolecules, ENSCR and CNRS UMR 6052, Rennes, 35700, Fr.

SOURCE: Organic Letters (2002), 4(9), 1507-1509

CODEN: ORLEF7; ISSN: 1523-7060

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 137:5763

AB A simple and mild TEMPO-CuCl catalyzed aerobic oxidation of primary and secondary alcs. to the corresponding aldehydes and ketones in ionic liquid [bmim][PF6] with no trace of overoxidn. to carboxylic acids has been developed. The product can be isolated by a simple extraction with organic solvent, and the ionic liquid can be recycled or reused.

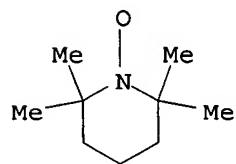
IT 2564-83-2, TEMPO

RL: CAT (Catalyst use); USES (Uses)

(TEMPO-catalyzed aerobic oxidation of alcs. to aldehydes and ketones in ionic liquid [bmim][PF6])

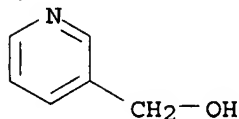
RN 2564-83-2 HCAPLUS

CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)

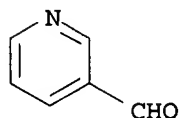


Updated Search

IT 100-55-0, 3-(Hydroxymethyl)pyridine
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (TEMPO-catalyzed aerobic oxidation of alcs. to aldehydes and ketones in ionic liquid [bmim][PF6])
 RN 100-55-0 HCAPLUS
 CN 3-Pyridinemethanol (CA INDEX NAME)



IT 500-22-1P, 3-Formylpyridine
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (TEMPO-catalyzed aerobic oxidation of alcs. to aldehydes and ketones in ionic liquid [bmim][PF6])
 RN 500-22-1 HCAPLUS
 CN 3-Pyridinecarboxaldehyde (CA INDEX NAME)



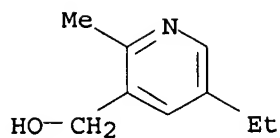
REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 11 OF 15 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1992:83223 HCAPLUS
 DOCUMENT NUMBER: 116:83223
 TITLE: Manufacture of aldehydes from primary alcohols
 INVENTOR(S): Torii, Shigeru; Iguchi, Tsutomu; Matsumoto, Shigeaki; Fukushima, Mitsuhiro
 PATENT ASSIGNEE(S): Osaka Yuki Kagaku Kogyo Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03184934	A	19910812	JP 1989-322842	19891212

PRIORITY APPLN. INFO.: JP 1989-322842 19891212
 OTHER SOURCE(S): CASREACT 116:83223; MARPAT 116:83223
 AB Aldehydes are manufactured by treating primary alcs. with R1R2R3R4NBrO2 (R1-4 = C1-20 alkyl or aralkyl) in the presence of N-oxyl compds. Thus, treating 1-undecanol with 4-benzoyloxy-2,2,6,6-tetramethylpiperidine-1-oxyl and tetrabutylammonium bromite in CH2Cl2 at room temperature gave 95% undecanal.
 IT 123903-23-1, 5-Ethyl-3-hydroxymethyl-2-methylpyridine
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (oxidation of, with N-oxyl compound and quaternary ammonium bromite)
 RN 123903-23-1 HCAPLUS
 CN 3-Pyridinemethanol, 5-ethyl-2-methyl- (9CI) (CA INDEX NAME)



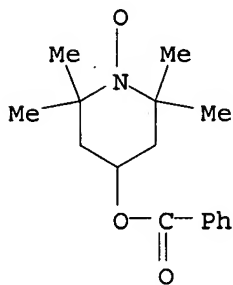
IT 3225-26-1 95407-69-5

RL: RCT (Reactant); RACT (Reactant or reagent)

(oxidation with quaternary ammonium bromite and, of primary alcs. to aldehydes)

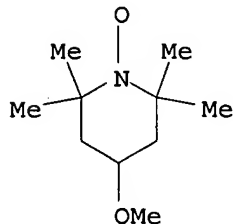
RN 3225-26-1 HCAPLUS

CN 1-Piperidinyloxy, 4-(benzoyloxy)-2,2,6,6-tetramethyl- (CA INDEX NAME)



RN 95407-69-5 HCAPLUS

CN 1-Piperidinyloxy, 4-methoxy-2,2,6,6-tetramethyl- (CA INDEX NAME)



IT 123903-24-2P, 5-Ethyl-3-formyl-2-methylpyridine

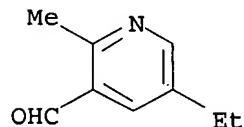
RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of, by oxidation of ethyl(hydroxymethyl)methylpyridine with N-oxyl

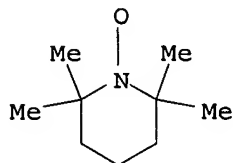
compound and quaternary ammonium bromite)

RN 123903-24-2 HCAPLUS

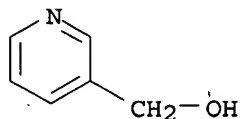
CN 3-Pyridinecarboxaldehyde, 5-ethyl-2-methyl- (9CI) (CA INDEX NAME)



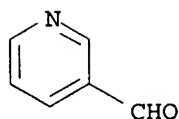
DOCUMENT NUMBER: 116:20658
 TITLE: A general synthetic method for the oxidation of primary alcohols to aldehydes: (S)-(+)-2-methylbutanal
 AUTHOR(S): Anelli, Pier Lucio; Montanari, Fernando; Quici, Silvio
 CORPORATE SOURCE: Dip. Chim. Org. Ind., Univ. Milano, Milan, I-20133, Italy
 SOURCE: Organic Syntheses (1990), 69, 212-19
 CODEN: ORSYAT; ISSN: 0078-6209
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 116:20658
 AB The rapid, inexpensive, selective oxidation of alcs. to aldehydes was achieved by the oxidation of alcs. with sodium hypochlorite in the presence of 2,2,6,6-tetramethylpiperidin-1-oxyl and KBr. The oxidation of (S)-2-methyl-1-butanol with sodium hypochlorite in the presence of 2,2,6,6-tetramethylpiperidin-1-oxyl and KBr gave 82-84% (S)-2-methylbutanal.
 IT 2564-83-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (oxidizing agent containing sodium hypochlorite and potassium bromide and, for alcs.)
 RN 2564-83-2 HCAPLUS
 CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



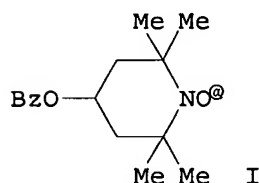
IT 100-55-0, 3-Pyridinemethanol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (oxidation of, with sodium hypochlorite in presence of tetramethylpiperidinoxyl and potassium bromide)
 RN 100-55-0 HCAPLUS
 CN 3-Pyridinemethanol (CA INDEX NAME)



IT 500-22-1P, 3-Pyridinecarboxaldehyde
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of, by oxidation of pyridinemethanol with sodium hypochlorite in presence of tetramethylpiperidinoxyl and potassium bromide)
 RN 500-22-1 HCAPLUS
 CN 3-Pyridinecarboxaldehyde (CA INDEX NAME)



L36 ANSWER 13 OF 15 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1991:513733 HCAPLUS
 DOCUMENT NUMBER: 115:113733
 TITLE: A new oxidizing system for aromatic alcohols by the combination of N-oxoammonium salt and electrosynthesized tetraalkylammonium tribromide
 AUTHOR(S): Inokuchi, Tsutomu; Matsumoto, Sigeaki; Fukushima, Mitsuhiro; Torii, Sigeru
 CORPORATE SOURCE: Fac. Eng., Okayama Univ., Okayama, 700, Japan
 SOURCE: Bulletin of the Chemical Society of Japan (1991), 64(3), 796-800
 CODEN: BCSJA8; ISSN: 0009-2673
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 115:113733
 GI

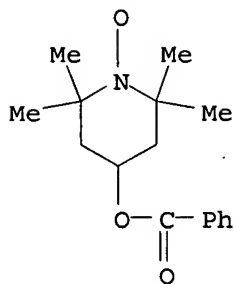


AB A combination of piperidinyloxy I and tetraalkylammonium tribromides (R_4NBr_3), which are available from the corresponding tetraalkylammonium bromides via electrooxidn. with KBr, is useful for oxidation of primary and secondary alcs. to aldehydes and ketones, resp. The oxidation proceeds smoothly even with 0.5-1.0 mol % I and 1.5-2.0 equiv of tetraalkylammonium tribromide in an aqueous-organic two-phase solution buffered at pH 8.0-8.6.

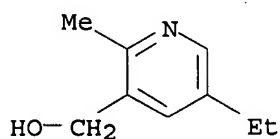
This recyclable oxidant/cooxidant system may involve formation of N-oxoammonium salts, the actual oxidizing agents of alcs., by the action of hypobromite species generated from R_4NBr_3 in the binary solution. Benzylic alcs. bearing electron-releasing groups on the aromatic nucleus are oxidized to aldehydes or ketones without any bromination and overoxidn.

IT 3225-26-1
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (oxidation by tetraalkylammonium tribromides and, of alcs.)

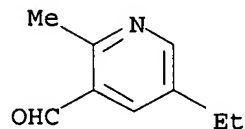
RN 3225-26-1 HCAPLUS
 CN 1-Piperidinyloxy, 4-(benzoyloxy)-2,2,6,6-tetramethyl- (CA INDEX NAME)



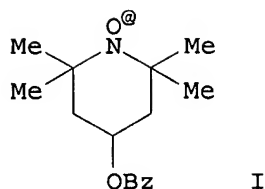
IT 123903-23-1
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (oxidation of, by piperidinoxyl radical and tetrabutylammonium tribromide)
 RN 123903-23-1 HCAPLUS
 CN 3-Pyridinemethanol, 5-ethyl-2-methyl- (9CI) (CA INDEX NAME)



IT 123903-24-2P, 5-Ethyl-2-methyl-3-pyridinecarboxaldehyde
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 123903-24-2 HCAPLUS
 CN 3-Pyridinecarboxaldehyde, 5-ethyl-2-methyl- (9CI) (CA INDEX NAME)



L36 ANSWER 14 OF 15 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1990:54469 HCAPLUS
 DOCUMENT NUMBER: 112:54469
 TITLE: A selective and efficient method for alcohol
 oxidations mediated by N-oxoammonium salts in
 combination with sodium bromite
 AUTHOR(S): Inokuchi, Tsutomu; Matsumoto, Sigeaki; Nishiyama,
 Tokio; Torii, Sigeru
 CORPORATE SOURCE: Fac. Eng., Okayama Univ., Okayama, 700, Japan
 SOURCE: Journal of Organic Chemistry (1990), 55(2), 462-6
 CODEN: JOCEAH; ISSN: 0022-3263
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 112:54469
 GI



AB The oxidation of primary and secondary alcs. leading to aldehydes, carboxylic acids, and ketones has been carried out in N-oxoammonium salt-NaBrO₂ systems. Sodium bromite as a stoichiometric oxidizing reagent activates N-oxyl compds. (recycling catalysts, e.g., I) to their N-oxoammonium salts in a weakly basic medium, which oxidize primary hydroxyl groups preferentially (rather than secondary ones) to the corresponding aldehydes. Calcium hypochlorite is used as an alternative terminal oxidant in the same media. The procedure, applicable to the selective formation of γ - and δ -lactones, β -hydroxy aldehydes, and 2-acetoxy ketones, is advantageous in terms of reagent cost, safety, and ease of operation.

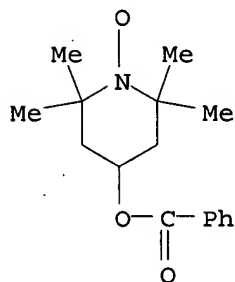
IT 3225-26-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(oxidation of alcs. by sodium bromite or calcium hypochlorite in presence of)

RN 3225-26-1 HCAPLUS

CN 1-Piperidinyloxy, 4-(benzoyloxy)-2,2,6,6-tetramethyl- (CA INDEX NAME)



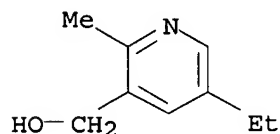
IT 123903-23-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(oxidation of, with N-oxyl compound and sodium bromite)

RN 123903-23-1 HCAPLUS

CN 3-Pyridinemethanol, 5-ethyl-2-methyl- (9CI) (CA INDEX NAME)



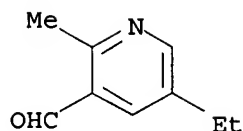
IT 123903-24-2P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of)

RN 123903-24-2 HCAPLUS

CN 3-Pyridinecarboxaldehyde, 5-ethyl-2-methyl- (9CI) (CA INDEX NAME)



L36 ANSWER 15 OF 15 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1989:632782 HCAPLUS

DOCUMENT NUMBER: 111:232782

TITLE: Preparation of formylheterocycles via oxidation of (hydroxymethyl)heterocycles with hypohalite in the presence of tetraalkylpyrrolidines and piperidines

INVENTOR(S): Kuekenhoechner, Thomas; Goetz, Norbert; Theobald, Hans; Knaus, Guenter H.

PATENT ASSIGNEE(S): BASF A.-G., Fed. Rep. Ger.

SOURCE: Ger. Offen., 10 pp.

CODEN: GWXXBX

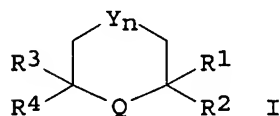
DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3738909	A1	19890524	DE 1987-3738909	19871117
EP 316783	A1	19890524	EP 1988-118788	19881111
EP 316783	B1	19920318		
R: BE, CH, DE, FR, GB, IT, LI, NL				
CA 1331383	C	19940809	CA 1988-583240	19881116
PRIORITY APPLN. INFO.:			DE 1987-3738909	A 19871117
OTHER SOURCE(S):	CASREACT 111:232782; MARPAT 111:232782			
GI				



AB ArCHO (Ar = mono- or diazafuryl, mono- or diazaphenyl) were prepared by oxidation of the corresponding ArCH₂OH precursors with inorg. or organic hypochlorites or hypobromites in the presence of tetraalkylcycloamines I (R₁-R₄ = C₁-4 alkyl; Q = N:O⁺ X⁻, NOH, NO; X = anion; Y = O, CO, CR₅R₆; n = 0,1; R₅,R₆ = H, OH, organic residue). Thus, 5-hydroxymethyl-3-tert-butylisoxazole, 2,2,6,6-tetramethylpiperidine-1-oxyl, KBr, NaH₂PO₄·2H₂O, Na₂HPO₄·H₂O, CH₂Cl₂, and H₂O were stirred vigorously while 14% aqueous NaOCl was added over 3.5 h to give 77% 5-formyl-3-tert-butylisoxazole.

IT 2564-83-2

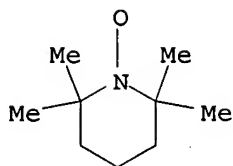
RL: CAT (Catalyst use); USES (Uses)

(catalysts, for oxidation of hydroxymethyl heterocycles with hypohalite)

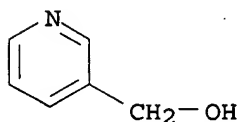
RN 2564-83-2 HCAPLUS

CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)

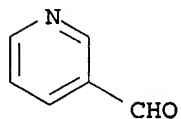
Updated Search



IT 100-55-0, 3-Pyridinemethanol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (oxidation of, with hypohalite, in the presence of tetraalkylpiperidines).
 RN 100-55-0 HCAPLUS
 CN 3-Pyridinemethanol (CA INDEX NAME)



IT 500-22-1P, 3-Pyridinecarboxaldehyde
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of, via hypohalite oxidation of hydroxymethyl precursor)
 RN 500-22-1 HCAPLUS
 CN 3-Pyridinecarboxaldehyde (CA INDEX NAME)



=> file caold		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	99.92	1003.64
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-12.48	-14.82

FILE 'CAOLD' ENTERED AT 16:40:35 ON 11 OCT 2007
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FILE COVERS 1907-1966
 FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE display formats.

Updated Search

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

=> d his

(FILE 'HOME' ENTERED AT 16:12:38 ON 11 OCT 2007)

FILE 'REGISTRY' ENTERED AT 16:13:27 ON 11 OCT 2007
E UNDECANOL/CN

L1 2 S E3

FILE 'REGISTRY' ENTERED AT 16:21:06 ON 11 OCT 2007

L2 STRUCTURE UPLOADED

L3 9 S L2

L4 STRUCTURE UPLOADED

L5 4 S L4

L6 STRUCTURE UPLOADED

L7 13 S L6

L8 1553 S L6 FULL

FILE 'HCAPLUS' ENTERED AT 16:26:51 ON 11 OCT 2007

L9 1262 S L8/PREP

FILE 'REGISTRY' ENTERED AT 16:27:02 ON 11 OCT 2007

L10 STRUCTURE UPLOADED

L11 50 S L10

L12 3368 S L10 FULL

FILE 'HCAPLUS' ENTERED AT 16:28:36 ON 11 OCT 2007

L13 2593 S L12/RCT

L14 470 S L13 AND L9

FILE 'REGISTRY' ENTERED AT 16:29:01 ON 11 OCT 2007

L15 STRUCTURE UPLOADED

L16 50 S L15

L17 8707 S L15 FULL

FILE 'HCAPLUS' ENTERED AT 16:31:15 ON 11 OCT 2007

L18 10014 S L17

L19 3 S L18 AND L14

FILE 'REGISTRY' ENTERED AT 16:31:58 ON 11 OCT 2007

FILE 'CAOLD' ENTERED AT 16:32:00 ON 11 OCT 2007

L20 0 S L8 AND L12 AND L17

FILE 'REGISTRY' ENTERED AT 16:33:28 ON 11 OCT 2007

L21 STRUCTURE UPLOADED

L22 6 S L21

L23 6 S L22

L24 1936 S L22 FULL

FILE 'HCAPLUS' ENTERED AT 16:35:35 ON 11 OCT 2007

L25 1504 S L24/PREP

FILE 'REGISTRY' ENTERED AT 16:35:41 ON 11 OCT 2007

L26 STRUCTURE UPLOADED

L27 32 S L26

Updated Search

L28 6553 S L26 FULL

FILE 'HCAPLUS' ENTERED AT 16:37:09 ON 11 OCT 2007

L29 2704 S L28/RCT
L30 451 S L29 AND L25
L31 451 S L24 AND L30
L32 16 S L30 AND L17
L33 1 S L32 AND SHIOMI, Y?/AU
L34 1 S L32 AND UNO, O?/AU
L35 0 S L34 NOT L33
L36 15 S L32 NOT L33
L37 0 S L36 AND OHTA, A?/AU
L38 0 S L36 AND SUNAKAMI, T?/AU

FILE 'CAOLD' ENTERED AT 16:40:35 ON 11 OCT 2007

=> s l30 and l17

QUALIFICATION NOT VALID FOR L28

Field code qualifications can only be applied to text terms.

=> s l28 and l17

416 L28

82 L17

L39 0 L28 AND L17

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

1.35

1004.99

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

0.00

-14.82

FILE 'REGISTRY' ENTERED AT 16:42:21 ON 11 OCT 2007

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STRUCTURE FILE UPDATES: 10 OCT 2007 HIGHEST RN 950149-06-1

DICTIONARY FILE UPDATES: 10 OCT 2007 HIGHEST RN 950149-06-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=>

Updated Search

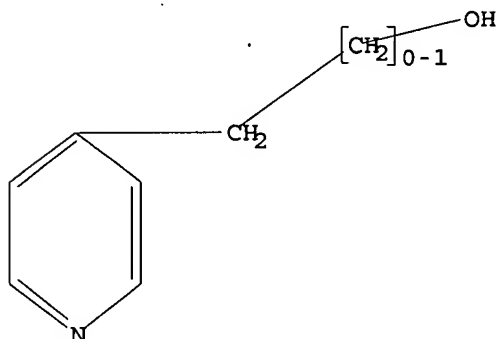
Uploading C:\Documents and Settings\brobinson1\My Documents\stnweb\Queries\asdfsdbn.str

L40 STRUCTURE UPLOADED

=> d l40

L40 HAS NO ANSWERS

L40 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l40

SAMPLE SEARCH INITIATED 16:43:40 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 24635 TO ITERATE

8.1% PROCESSED 2000 ITERATIONS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

11 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
 BATCH **COMPLETE**
PROJECTED ITERATIONS: 483308 TO 502092
PROJECTED ANSWERS: 2011 TO 3407

L41 11 SEA SSS SAM L40

=> s l40 full

THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 171.65 U.S. DOLLARS

DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y

FULL SEARCH INITIATED 16:43:45 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 490479 TO ITERATE

100.0% PROCESSED 490479 ITERATIONS
SEARCH TIME: 00.00.02

2565 ANSWERS

L42 2565 SEA SSS FUL L40

=> file hcaplus

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
173.00	1177.99

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
0.00	-14.82

CA SUBSCRIBER PRICE

Updated Search

FILE 'HCAPLUS' ENTERED AT 16:43:51 ON 11 OCT 2007
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FILE COVERS 1907 - 11 Oct 2007 VOL 147 ISS 16
FILE LAST UPDATED: 10 Oct 2007 (20071010/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s 142/rct
      9144 L42
      3023813 RCT/RL
L43      1369 L42/RCT
          (L42 (L) RCT/RL)
```

=> file reg		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	2.60	1180.59
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-14.82

FILE 'REGISTRY' ENTERED AT 16:43:58 ON 11 OCT 2007
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STRUCTURE FILE UPDATES: 10 OCT 2007 HIGHEST RN 950149-06-1
DICTIONARY FILE UPDATES: 10 OCT 2007 HIGHEST RN 950149-06-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

Updated Search

<http://www.cas.org/support/stngen/stndoc/properties.html>

=>

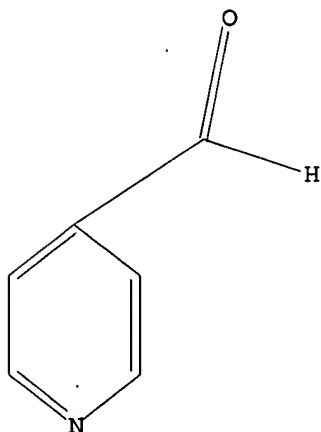
Uploading c:\Documents and Settings\brobinson1\My Documents\stnweb\Queries\asdfngv.tsr

L44 STRUCTURE UPLOADED

=> d l44.

L44 HAS NO ANSWERS

L44 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l44

SAMPLE SEARCH INITIATED 16:45:02 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 33619 TO ITERATE

5.9% PROCESSED 2000 ITERATIONS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

7 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 661419 TO 683341
PROJECTED ANSWERS: 1703 TO 3003

L45 7 SEA SSS SAM L44

=> s l44 full

THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 171.65 U.S. DOLLARS

DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y

FULL SEARCH INITIATED 16:45:06 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 667674 TO ITERATE

100.0% PROCESSED 667674 ITERATIONS
SEARCH TIME: 00.00.02

1282 ANSWERS

L46 1282 SEA SSS FUL L44

=> file hcaplus

Updated Search

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	172.55	1353.14
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-14.82

FILE 'HCAPLUS' ENTERED AT 16:45:12 ON 11 OCT 2007
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FILE COVERS 1907 - 11 Oct 2007 VOL 147 ISS 16
 FILE LAST UPDATED: 10 Oct 2007 (20071010/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

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=> s l46/prep
      11977 L46
      4473482 PREP/RL
L47      1170 L46/PREP
          (L46 (L) PREP/RL)
```

=> d his

(FILE 'HOME' ENTERED AT 16:12:38 ON 11 OCT 2007)

FILE 'REGISTRY' ENTERED AT 16:13:27 ON 11 OCT 2007
 E UNDECANOL/CN

L1 2 S E3

FILE 'REGISTRY' ENTERED AT 16:21:06 ON 11 OCT 2007

```
L2      STRUCTURE UPLOADED
L3      9 S L2
L4      STRUCTURE UPLOADED
L5      4 S L4
L6      STRUCTURE UPLOADED
L7      13 S L6
L8      1553 S L6 FULL
```

FILE 'HCAPLUS' ENTERED AT 16:26:51 ON 11 OCT 2007

L9 1262 S L8/PREP

FILE 'REGISTRY' ENTERED AT 16:27:02 ON 11 OCT 2007

```
L10     STRUCTURE UPLOADED
L11     50 S L10
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Updated Search

L12 3368 S L10 FULL

 FILE 'HCAPLUS' ENTERED AT 16:28:36 ON 11 OCT 2007
 L13 2593 S L12/RCT
 L14 470 S L13 AND L9

 FILE 'REGISTRY' ENTERED AT 16:29:01 ON 11 OCT 2007
 L15 STRUCTURE UPLOADED
 L16 50 S L15
 L17 8707 S L15 FULL

 FILE 'HCAPLUS' ENTERED AT 16:31:15 ON 11 OCT 2007
 L18 10014 S L17
 L19 3 S L18 AND L14

 FILE 'REGISTRY' ENTERED AT 16:31:58 ON 11 OCT 2007

 FILE 'CAOLD' ENTERED AT 16:32:00 ON 11 OCT 2007
 L20 0 S L8 AND L12 AND L17

 FILE 'REGISTRY' ENTERED AT 16:33:28 ON 11 OCT 2007
 L21 STRUCTURE UPLOADED
 L22 6 S L21
 L23 6 S L22
 L24 1936 S L22 FULL

 FILE 'HCAPLUS' ENTERED AT 16:35:35 ON 11 OCT 2007
 L25 1504 S L24/PREP

 FILE 'REGISTRY' ENTERED AT 16:35:41 ON 11 OCT 2007
 L26 STRUCTURE UPLOADED
 L27 32 S L26
 L28 6553 S L26 FULL

 FILE 'HCAPLUS' ENTERED AT 16:37:09 ON 11 OCT 2007
 L29 2704 S L28/RCT
 L30 451 S L29 AND L25
 L31 451 S L24 AND L30
 L32 16 S L30 AND L17
 L33 1 S L32 AND SHIOMI, Y?/AU
 L34 1 S L32 AND UNO, O?/AU
 L35 0 S L34 NOT L33
 L36 15 S L32 NOT L33
 L37 0 S L36 AND OHTA, A?/AU
 L38 0 S L36 AND SUNAKAMI, T?/AU

 FILE 'CAOLD' ENTERED AT 16:40:35 ON 11 OCT 2007
 L39 0 S L28 AND L17

 FILE 'REGISTRY' ENTERED AT 16:42:21 ON 11 OCT 2007
 L40 STRUCTURE UPLOADED
 L41 11 S L40
 L42 2565 S L40 FULL

 FILE 'HCAPLUS' ENTERED AT 16:43:51 ON 11 OCT 2007
 L43 1369 S L42/RCT

 FILE 'REGISTRY' ENTERED AT 16:43:58 ON 11 OCT 2007
 L44 STRUCTURE UPLOADED
 L45 7 S L44
 L46 1282 S L44 FULL

FILE 'HCAPLUS' ENTERED AT 16:45:12 ON 11 OCT 2007

L47 1170 S L46/PREP

=> s l47 and l43 and l17

10014 L17

L48 2 L47 AND L43 AND L17

=> d l48, ibib abs hitstr, 1-2

L48 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1991:513733 HCAPLUS

DOCUMENT NUMBER: 115:113733

TITLE: A new oxidizing system for aromatic alcohols by the combination of N-oxoammonium salt and

AUTHOR(S): electrosynthesized tetraalkylammonium tribromide
Inokuchi, Tsutomu; Matsumoto, Sigeaki; Fukushima, Mitsuhiro; Torii, Sigeru

CORPORATE SOURCE: Fac. Eng., Okayama Univ., Okayama, 700, Japan
SOURCE: Bulletin of the Chemical Society of Japan (1991), 64(3), 796-800

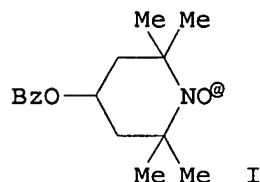
CODEN: BCSJA8; ISSN: 0009-2673

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 115:113733

GI



AB A combination of piperidinyloxy I and tetraalkylammonium tribromides (R₄NBr₃), which are available from the corresponding tetraalkylammonium bromides via electrooxidn. with KBr, is useful for oxidation of primary and secondary alcs. to aldehydes and ketones, resp. The oxidation proceeds smoothly even with 0.5-1.0 mol % I and 1.5-2.0 equiv of tetraalkylammonium tribromide in an aqueous-organic two-phase solution buffered at pH 8.0-8.6.

This recyclable oxidant/cooxidant system may involve formation of N-oxoammonium salts, the actual oxidizing agents of alcs., by the action of hypobromite species generated from R₄NBr₃ in the binary solution. Benzylic alcs. bearing electron-releasing groups on the aromatic nucleus are oxidized to aldehydes or ketones without any bromination and overoxidn.

IT 3225-26-1

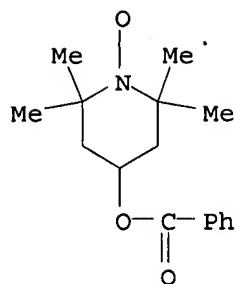
RL: RCT (Reactant); RACT (Reactant or reagent)

(oxidation by tetraalkylammonium tribromides and, of alcs.)

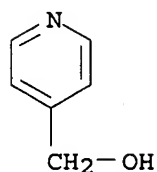
RN 3225-26-1 HCAPLUS

CN 1-Piperidinyloxy, 4-(benzoyloxy)-2,2,6,6-tetramethyl- (CA INDEX NAME)

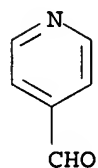
Updated Search



IT 586-95-8, 4-(Hydroxymethyl)pyridine
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (oxidation of, by piperidinoxyl radical and tetrabutylammonium tribromide)
 RN 586-95-8 HCAPLUS
 CN 4-Pyridinemethanol (CA INDEX NAME)



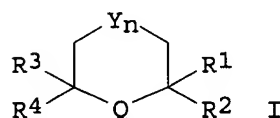
IT 872-85-5P, 4-Pyridinecarboxaldehyde
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 872-85-5 HCAPLUS
 CN 4-Pyridinecarboxaldehyde (CA INDEX NAME)



L48 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1989:632782 HCAPLUS
 DOCUMENT NUMBER: 111:232782
 TITLE: Preparation of formylheterocycles via oxidation of
 (hydroxymethyl)heterocycles with hypohalite in the
 presence of tetraalkylpyrrolidines and piperidines
 Kuekenhoechner, Thomas; Goetz, Norbert; Theobald, Hans;
 Knaus, Guenter H.
 INVENTOR(S):
 PATENT ASSIGNEE(S): BASF A.-G., Fed. Rep. Ger.
 SOURCE: Ger. Offen., 10 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	---	-----	-----

DE 3738909	A1	19890524	DE 1987-3738909	19871117
EP 316783	A1	19890524	EP 1988-118788	19881111
EP 316783	B1	19920318		
R: BE, CH, DE, FR, GB, IT, LI, NL				
CA 1331383	C	19940809	CA 1988-583240	19881116
PRIORITY APPLN. INFO.:			DE 1987-3738909	A 19871117
OTHER SOURCE(S):	CASREACT 111:232782; MARPAT 111:232782			
GI				

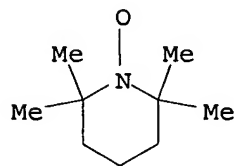


AB ArCHO (Ar = mono- or diazafuryl, mono- or diazaphenyl) were prepared by oxidation of the corresponding ArCH₂OH precursors with inorg. or organic hypochlorites or hypobromites in the presence of tetraalkylcycloamines I (R₁-R₄ = C₁-4 alkyl; Q = N:O⁺ X⁻, NOH, NO; X = anion; Y = O, CO, CR₅R₆; n = 0,1; R₅,R₆ = H, OH, organic residue). Thus, 5-hydroxymethyl-3-tert-butylisoxazole, 2,2,6,6-tetramethylpiperidine-1-oxyl, KBr, NaH₂PO₄·2H₂O, Na₂HPO₄·H₂O, CH₂Cl₂, and H₂O were stirred vigorously while 14% aqueous NaOCl was added over 3.5 h to give 77% 5-formyl-3-tert-butylisoxazole.

IT 2564-83-2
 RL: CAT (Catalyst use); USES (Uses)
 (catalysts, for oxidation of hydroxymethyl heterocycles with hypohalite)

RN 2564-83-2 HCAPLUS

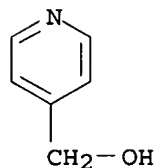
CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



IT 586-95-8, 4-Pyridinemethanol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (oxidation of, with hypohalite, in the presence of tetraalkylpiperidines)

RN 586-95-8 HCAPLUS

CN 4-Pyridinemethanol (CA INDEX NAME)

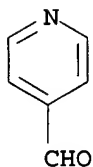


IT 872-85-5P, 4-Pyridinecarboxaldehyde
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of, via hypohalite oxidation of hydroxymethyl precursor)

RN 872-85-5 HCAPLUS

CN 4-Pyridinecarboxaldehyde (CA INDEX NAME)

Updated Search



=> file caold
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
13.14	1366.28

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-1.56	-16.38

CA SUBSCRIBER PRICE

FILE 'CAOLD' ENTERED AT 16:45:42 ON 11 OCT 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE COVERS 1907-1966

FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE display formats.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

=> d his

(FILE 'HOME' ENTERED AT 16:12:38 ON 11 OCT 2007)

FILE 'REGISTRY' ENTERED AT 16:13:27 ON 11 OCT 2007
E UNDECANOL/CN

L1 2 S E3

FILE 'REGISTRY' ENTERED AT 16:21:06 ON 11 OCT 2007

L2 STRUCTURE UPLOADED

L3 9 S L2

L4 STRUCTURE UPLOADED

L5 4 S L4

L6 STRUCTURE UPLOADED

L7 13 S L6

L8 1553 S L6 FULL

FILE 'HCAPLUS' ENTERED AT 16:26:51 ON 11 OCT 2007

L9 1262 S L8/PREP

Updated Search

FILE 'REGISTRY' ENTERED AT 16:27:02 ON 11 OCT 2007
 L10 STRUCTURE UPLOADED
 L11 50 S L10
 L12 3368 S L10 FULL

 FILE 'HCAPLUS' ENTERED AT 16:28:36 ON 11 OCT 2007
 L13 2593 S L12/RCT
 L14 470 S L13 AND L9

 FILE 'REGISTRY' ENTERED AT 16:29:01 ON 11 OCT 2007
 L15 STRUCTURE UPLOADED
 L16 50 S L15
 L17 8707 S L15 FULL

 FILE 'HCAPLUS' ENTERED AT 16:31:15 ON 11 OCT 2007
 L18 10014 S L17
 L19 3 S L18 AND L14

 FILE 'REGISTRY' ENTERED AT 16:31:58 ON 11 OCT 2007

 FILE 'CAOLD' ENTERED AT 16:32:00 ON 11 OCT 2007
 L20 0 S L8 AND L12 AND L17

 FILE 'REGISTRY' ENTERED AT 16:33:28 ON 11 OCT 2007
 L21 STRUCTURE UPLOADED
 L22 6 S L21
 L23 6 S L22
 L24 1936 S L22 FULL

 FILE 'HCAPLUS' ENTERED AT 16:35:35 ON 11 OCT 2007
 L25 1504 S L24/PREP

 FILE 'REGISTRY' ENTERED AT 16:35:41 ON 11 OCT 2007
 L26 STRUCTURE UPLOADED
 L27 32 S L26
 L28 6553 S L26 FULL

 FILE 'HCAPLUS' ENTERED AT 16:37:09 ON 11 OCT 2007
 L29 2704 S L28/RCT
 L30 451 S L29 AND L25
 L31 451 S L24 AND L30
 L32 16 S L30 AND L17
 L33 1 S L32 AND SHIOMI, Y?/AU
 L34 1 S L32 AND UNO, O?/AU
 L35 0 S L34 NOT L33
 L36 15 S L32 NOT L33
 L37 0 S L36 AND OHTA, A?/AU
 L38 0 S L36 AND SUNAKAMI, T?/AU

 FILE 'CAOLD' ENTERED AT 16:40:35 ON 11 OCT 2007
 L39 0 S L28 AND L17

 FILE 'REGISTRY' ENTERED AT 16:42:21 ON 11 OCT 2007
 L40 STRUCTURE UPLOADED
 L41 11 S L40
 L42 2565 S L40 FULL

 FILE 'HCAPLUS' ENTERED AT 16:43:51 ON 11 OCT 2007
 L43 1369 S L42/RCT

FILE 'REGISTRY' ENTERED AT 16:43:58 ON 11 OCT 2007
L44 STRUCTURE UPLOADED
L45 7 S L44
L46 1282 S L44 FULL

FILE 'HCAPLUS' ENTERED AT 16:45:12 ON 11 OCT 2007
L47 1170 S L46/PREP
L48 2 S L47 AND L43 AND L17

FILE 'CAOLD' ENTERED AT 16:45:42 ON 11 OCT 2007

=> s l46 and l42 and l17
101 L46
239 L42
82 L17
L49 0 L46 AND L42 AND L17

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	1.35	1367.63
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-16.38

FILE 'CASREACT' ENTERED AT 16:47:37 ON 11 OCT 2007
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FILE CONTENT:1840 - 6 Oct 2007 VOL 147 ISS 16

New CAS Information Use Policies, enter HELP USAGETERMS for details.

* CASREACT now has more than 13.8 million reactions *
* *****

Some CASREACT records are derived from the ZIC/VINITI database (1974-1999) provided by InfoChem, INPI data prior to 1986, and Biotransformations database compiled under the direction of Professor Dr. Klaus Kieslich.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=>
Uploading C:\Documents and Settings\brobinson1\My Documents\stnweb\Queries\anjsdfhutym.str

L50 STRUCTURE UPLOADED

=> d l50
L50 HAS NO ANSWERS
L50 STR

Updated Search

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

=> s 150

SAMPLE SEARCH INITIATED 16:53:20 FILE 'CASREACT'

SCREENING COMPLETE - 11 REACTIONS TO VERIFY FROM 3 DOCUMENTS

100.0% DONE 11 VERIFIED 0 HIT RXNS 0 DOCS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**

PROJECTED VERIFICATIONS: 22 TO 418
PROJECTED ANSWERS: 0 TO 0

L51 0 SEA SSS SAM L50 (0 REACTIONS)

=> s 150 full

THE ESTIMATED SEARCH COST FOR FILE 'CASREACT' IS 113.10 U.S. DOLLARS

DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y

FULL SEARCH INITIATED 16:53:25 FILE 'CASREACT'

SCREENING COMPLETE - 1015 REACTIONS TO VERIFY FROM 81 DOCUMENTS

100.0% DONE 1015 VERIFIED 0 HIT RXNS 0 DOCS
SEARCH TIME: 00.00.01

L52 0 SEA SSS FUL L50 (0 REACTIONS)

=>

Uploading C:\Documents and Settings\brobinson1\My
Documents\stnweb\Queries\asdfsafdjn.str

L53 STRUCTURE UPLOADED

=> d 153

L53 HAS NO ANSWERS

L53 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

=> s 153

SAMPLE SEARCH INITIATED 16:56:32 FILE 'CASREACT'

SCREENING COMPLETE - 0 REACTIONS TO VERIFY FROM 0 DOCUMENTS

100.0% DONE 0 VERIFIED 0 HIT RXNS 0 DOCS
SEARCH TIME: 00.00.03

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**

PROJECTED VERIFICATIONS: 0 TO 0
PROJECTED ANSWERS: 0 TO 0

L54 0 SEA SSS SAM L53 (0 REACTIONS)

=> s 153 full

Updated Search

THE ESTIMATED SEARCH COST FOR FILE 'CASREACT' IS 113.10 U.S. DOLLARS

DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y

FULL SEARCH INITIATED 16:56:40 FILE 'CASREACT'

SCREENING COMPLETE - 0 REACTIONS TO VERIFY FROM 0 DOCUMENTS

100.0% DONE 0 VERIFIED 0 HIT RXNS 0 DOCS

SEARCH TIME: 00.00.01

L55 0 SEA SSS FUL L53 (0 REACTIONS)

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

232.95

1600.58

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

0.00

-16.38

FILE 'REGISTRY' ENTERED AT 16:56:44 ON 11 OCT 2007

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 10 OCT 2007 HIGHEST RN 950149-06-1

DICTIONARY FILE UPDATES: 10 OCT 2007 HIGHEST RN 950149-06-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=>

Uploading C:\Documents and Settings\brobinson1\My Documents\stnweb\Queries\adsfsdjh.str

L56 STRUCTURE UPLOADED

=> d l56

L56 HAS NO ANSWERS

L56 STR

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

Structure attributes must be viewed using STN Express query preparation.

=> s l56

SAMPLE SEARCH INITIATED 16:58:25 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 58198 TO ITERATE

Updated Search

3.4% PROCESSED 2000 ITERATIONS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

7 ANSWERS

FULL FILE PROJECTIONS: ONLINE **INCOMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 1149577 TO 1178343
PROJECTED ANSWERS: 3217 TO 4929

L57 7 SEA SSS SAM L56

=>
Uploading C:\Documents and Settings\brobinson1\My
Documents\stnweb\Queries\awrewarewn.str

L58 STRUCTURE UPLOADED

=> d 158
L58 HAS NO ANSWERS
L58 STR
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

Structure attributes must be viewed using STN Express query preparation.

=> s 158
SAMPLE SEARCH INITIATED 16:59:15 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 13073 TO ITERATE

15.3% PROCESSED 2000 ITERATIONS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

25 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 254610 TO 268310
PROJECTED ANSWERS: 2502 TO 4034

L59 25 SEA SSS SAM L58

=> s 158 full
THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 171.65 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y
FULL SEARCH INITIATED 16:59:21 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 262612 TO ITERATE

100.0% PROCESSED 262612 ITERATIONS
SEARCH TIME: 00.00.02

3417 ANSWERS

L60 3417 SEA SSS FUL L58

=> file hcaplus
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
173.90	1774.48

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
0.00	-16.38

CA SUBSCRIBER PRICE

Updated Search

FILE 'HCAPLUS' ENTERED AT 16:59:27 ON 11 OCT 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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FILE COVERS 1907 - 11 Oct 2007 VOL 147 ISS 16
FILE LAST UPDATED: 10 Oct 2007 (20071010/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s l60/prep
      8176 L60
      4473482 PREP/RL
L61    2159 L60/PREP
      (L60 (L) PREP/RL)
```

```
=> s l61 and l17
      10014 L17
L62    11 L61 AND L17
```

=> file reg		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	2.60	1777.08
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-16.38

FILE 'REGISTRY' ENTERED AT 16:59:46 ON 11 OCT 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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STRUCTURE FILE UPDATES: 10 OCT 2007 HIGHEST RN 950149-06-1
DICTIONARY FILE UPDATES: 10 OCT 2007 HIGHEST RN 950149-06-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Updated Search

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=>
Uploading C:\Documents and Settings\brobinson1\My Documents\stnweb\Queries\ansdfjhy.str

L63 STRUCTURE UPLOADED

=> d l63
L63 HAS NO ANSWERS
L63 STR
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

Structure attributes must be viewed using STN Express query preparation.

=> s l63
SAMPLE SEARCH INITIATED 17:00:48 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 10704 TO ITERATE

18.7% PROCESSED 2000 ITERATIONS 8 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
 BATCH **COMPLETE**
PROJECTED ITERATIONS: 207880 TO 220280
PROJECTED ANSWERS: 464 TO 1248

L64 8 SEA SSS SAM L63

=> s l63 full
THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 171.65 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y
FULL SEARCH INITIATED 17:00:53 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 215219 TO ITERATE

100.0% PROCESSED 215219 ITERATIONS 976 ANSWERS
SEARCH TIME: 00.00.01

L65 976 SEA SSS FUL L63

=> file hcaplus		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	172.55	1949.63
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-16.38

FILE 'HCAPLUS' ENTERED AT 17:00:57 ON 11 OCT 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE COVERS 1907 - 11 Oct 2007 VOL 147 ISS 16
FILE LAST UPDATED: 10 Oct 2007 (20071010/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s 165/rct
      1486 L65
      3023813 RCT/RL
L66      985 L65/RCT
          (L65 (L) RCT/RL)
```

```
=> d his
```

```
(FILE 'HOME' ENTERED AT 16:12:38 ON 11 OCT 2007)
```

```
FILE 'REGISTRY' ENTERED AT 16:13:27 ON 11 OCT 2007
      E UNDECANOL/CN
```

```
L1      2 S E3
```

```
FILE 'REGISTRY' ENTERED AT 16:21:06 ON 11 OCT 2007
```

```
L2      STRUCTURE UPLOADED
```

```
L3      9 S L2
```

```
L4      STRUCTURE UPLOADED
```

```
L5      4 S L4
```

```
L6      STRUCTURE UPLOADED
```

```
L7      13 S L6
```

```
L8      1553 S L6 FULL
```

```
FILE 'HCAPLUS' ENTERED AT 16:26:51 ON 11 OCT 2007
```

```
L9      1262 S L8/PREP
```

```
FILE 'REGISTRY' ENTERED AT 16:27:02 ON 11 OCT 2007
```

```
L10     STRUCTURE UPLOADED
```

```
L11     50 S L10
```

```
L12     3368 S L10 FULL
```

```
FILE 'HCAPLUS' ENTERED AT 16:28:36 ON 11 OCT 2007
```

```
L13     2593 S L12/RCT
```

```
L14     470 S L13 AND L9
```

```
FILE 'REGISTRY' ENTERED AT 16:29:01 ON 11 OCT 2007
```

```
L15     STRUCTURE UPLOADED
```

```
L16     50 S L15
```

```
L17     8707 S L15 FULL
```

```
FILE 'HCAPLUS' ENTERED AT 16:31:15 ON 11 OCT 2007
```

```
L18     10014 S L17
```

Updated Search

L19 3 S L18 AND L14

 FILE 'REGISTRY' ENTERED AT 16:31:58 ON 11 OCT 2007

 FILE 'CAOLD' ENTERED AT 16:32:00 ON 11 OCT 2007
 L20 0 S L8 AND L12 AND L17

 FILE 'REGISTRY' ENTERED AT 16:33:28 ON 11 OCT 2007
 L21 STRUCTURE UPLOADED
 L22 6 S L21
 L23 6 S L22
 L24 1936 S L22 FULL

 FILE 'HCAPLUS' ENTERED AT 16:35:35 ON 11 OCT 2007
 L25 1504 S L24/PREP

 FILE 'REGISTRY' ENTERED AT 16:35:41 ON 11 OCT 2007
 L26 STRUCTURE UPLOADED
 L27 32 S L26
 L28 6553 S L26 FULL

 FILE 'HCAPLUS' ENTERED AT 16:37:09 ON 11 OCT 2007
 L29 2704 S L28/RCT
 L30 451 S L29 AND L25
 L31 451 S L24 AND L30
 L32 16 S L30 AND L17
 L33 1 S L32 AND SHIOMI, Y?/AU
 L34 1 S L32 AND UNO, O?/AU
 L35 0 S L34 NOT L33
 L36 15 S L32 NOT L33
 L37 0 S L36 AND OHTA, A?/AU
 L38 0 S L36 AND SUNAKAMI, T?/AU

 FILE 'CAOLD' ENTERED AT 16:40:35 ON 11 OCT 2007
 L39 0 S L28 AND L17

 FILE 'REGISTRY' ENTERED AT 16:42:21 ON 11 OCT 2007
 L40 STRUCTURE UPLOADED
 L41 11 S L40
 L42 2565 S L40 FULL

 FILE 'HCAPLUS' ENTERED AT 16:43:51 ON 11 OCT 2007
 L43 1369 S L42/RCT

 FILE 'REGISTRY' ENTERED AT 16:43:58 ON 11 OCT 2007
 L44 STRUCTURE UPLOADED
 L45 7 S L44
 L46 1282 S L44 FULL

 FILE 'HCAPLUS' ENTERED AT 16:45:12 ON 11 OCT 2007
 L47 1170 S L46/PREP
 L48 2 S L47 AND L43 AND L17

 FILE 'CAOLD' ENTERED AT 16:45:42 ON 11 OCT 2007
 L49 0 S L46 AND L42 AND L17

 FILE 'CASREACT' ENTERED AT 16:47:37 ON 11 OCT 2007
 L50 STRUCTURE UPLOADED
 L51 0 S L50
 L52 0 S L50 FULL
 L53 STRUCTURE UPLOADED

Updated Search

L54 0 S L53
L55 0 S L53 FULL

FILE 'REGISTRY' ENTERED AT 16:56:44 ON 11 OCT 2007

L56 STRUCTURE UPLOADED
L57 7 S L56
L58 STRUCTURE UPLOADED
L59 25 S L58
L60 3417 S L58 FULL

FILE 'HCAPLUS' ENTERED AT 16:59:27 ON 11 OCT 2007

L61 2159 S L60/PREP
L62 11 S L61 AND L17

FILE 'REGISTRY' ENTERED AT 16:59:46 ON 11 OCT 2007

L63 STRUCTURE UPLOADED
L64 8 S L63
L65 976 S L63 FULL

FILE 'HCAPLUS' ENTERED AT 17:00:57 ON 11 OCT 2007

L66 985 S L65/RCT

=> s l66 and l62

L67 9 L66 AND L62

=> s l67 and shiomi, y?/au

228 SHIOMI, Y?/AU
L68 0 L67 AND SHIOMI, Y?/AU

=> s l67 and uno, o?/au

37 UNO, O?/AU
L69 0 L67 AND UNO, O?/AU

=> s l67 and ohta, a?/au

930 OHTA, A?/AU
L70 0 L67 AND OHTA, A?/AU

=> s l67 and sunakami, t?/au

2 SUNAKAMI, T?/AU
L71 0 L67 AND SUNAKAMI, T?/AU

=> d l67, ibib abs hitstr, 1-9

L67 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2007:440534 HCAPLUS

DOCUMENT NUMBER: 147:72448

TITLE: Efficient NO equivalent for activation of molecular oxygen and its applications in transition-metal-free catalytic aerobic alcohol oxidation

AUTHOR(S): Xie, Yi; Mo, Weimin; Xu, Dong; Shen, Zhenlu; Sun, Nan; Hu, Baoxiang; Hu, Xinquan

CORPORATE SOURCE: College of Chemical Engineering and Material Sciences, Zhejiang University of Technology, Hangzhou, 310014, Peop. Rep. China

SOURCE: Journal of Organic Chemistry (2007), 72(11), 4288-4291
CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 147:72448

AB Tert-Bu nitrite (TBN) was identified as an efficient NO equivalent for the

Updated Search

activation of mol. oxygen. The unique property of TBN enabled TEMPO-catalyzed aerobic alc. oxidation to be performed in high-volume efficiency. Up to a 16,000 turnover number was achieved in this transition-metal-free aerobic catalytic system. Under the optimal reaction conditions, various alcs. were converted into their corresponding carbonyl compds. with TEMPO/HBr/TBN as catalyst. The newly developed method was suitable for the oxidation of solid substrate alcs. with high m.p. and/or low solubility under the help of min. solvent to form a slurry.

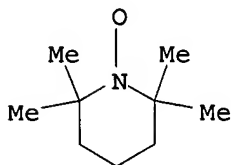
IT 2564-83-2, TEMPO

RL: CAT (Catalyst use); USES (Uses)

(tert-Bu nitrite as nitric oxide equivalent in aerobic alc. oxidation using tetramethylpiperidyl-oxy-hydrogen bromide-tert-Bu nitrite catalyst system)

RN 2564-83-2 HCAPLUS

CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



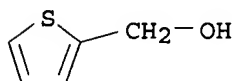
IT 636-72-6, 2-Thiophenemethanol

RL: RCT (Reactant); RACT (Reactant or reagent)

(tert-Bu nitrite as nitric oxide equivalent in aerobic alc. oxidation using tetramethylpiperidyl-oxy-hydrogen bromide-tert-Bu nitrite catalyst system)

RN 636-72-6 HCAPLUS

CN 2-Thiophenemethanol (CA INDEX NAME)



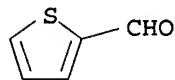
IT 98-03-3P, 2-Thiophenecarboxaldehyde

RL: SPN (Synthetic preparation); PREP (Preparation)

(tert-Bu nitrite as nitric oxide equivalent in aerobic alc. oxidation using tetramethylpiperidyl-oxy-hydrogen bromide-tert-Bu nitrite catalyst system)

RN 98-03-3 HCAPLUS

CN 2-Thiophenecarboxaldehyde (CA INDEX NAME)



REFERENCE COUNT: 68 THERE ARE 68 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L67 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:1187826 HCAPLUS

DOCUMENT NUMBER: 146:121623

TITLE: Multipolymer reaction system for selective aerobic alcohol oxidation: simultaneous use of multiple

Updated Search

different polymer-supported ligands
 AUTHOR(S): Chung, Cecilia Wan Ying; Toy, Patrick H.
 CORPORATE SOURCE: Department of Chemistry, The University of Hong Kong,
 Hong Kong, Peop. Rep. China
 SOURCE: Journal of Combinatorial Chemistry (2007), 9(1),
 115-120
 CODEN: JCCHFF; ISSN: 1520-4766
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB A multipolymer reaction system has been developed in which a water-soluble polymer-supported 2,2'-bipyridine group and a similarly immobilized TEMPO derivative are used as ligands for copper to effect the mild and selective aerobic oxidation of primary alcs. in acetonitrile-water solvent. In this reaction system, poly(ethylene glycol) monomethyl ether (mol. weight = 5000 Da) was used as the support for both the 2,2'-bipyridine and TEMPO moieties because of its solubility properties. The use of these functionalized polymers simultaneously in catalytic quantities allows for primary alcs. to be oxidized selectively to the corresponding aldehydes in an environmentally friendly manner. This is the first reported example of using two different polymer-supported ligands together to form an organometallic species capable of catalyzing an organic reaction.

IT 848328-35-8P, 4-Hydroxy-TEMPO

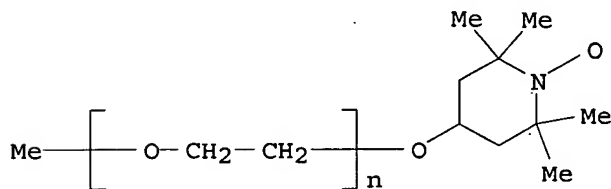
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);

USES (Uses)

(aerobic oxidation of alcs. to aldehydes using copper-polymer-supported bipyridine and polymer-supported TEMPO catalyst)

RN 848328-35-8 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -methyl- ω -[(2,2,6,6-tetramethyl-1-oxy-4-piperidinyloxy)]- (9CI) (CA INDEX NAME)



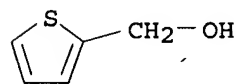
IT 636-72-6, 2-Thiophenemethanol 2226-96-2, 4-Hydroxy-TEMPO

RL: RCT (Reactant); RACT (Reactant or reagent)

(aerobic oxidation of alcs. to aldehydes using copper-polymer-supported bipyridine and polymer-supported TEMPO catalyst)

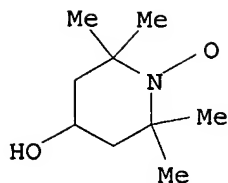
RN 636-72-6 HCAPLUS

CN 2-Thiophenemethanol (CA INDEX NAME)

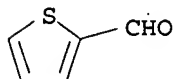


RN 2226-96-2 HCAPLUS

CN 1-Piperidinyloxy, 4-hydroxy-2,2,6,6-tetramethyl- (CA INDEX NAME)



IT 98-03-3P, 2-Thiophenecarboxaldehyde
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (aerobic oxidation of alcs. to aldehydes using copper-polymer-supported
 bipyridine and polymer-supported TEMPO catalyst)
 RN 98-03-3 HCAPLUS
 CN 2-Thiophenecarboxaldehyde (CA INDEX NAME)

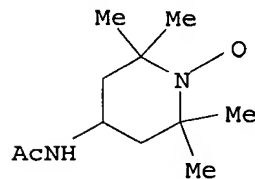


REFERENCE COUNT: 93 THERE ARE 93 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

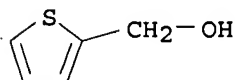
L67 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2006:761970 HCAPLUS
 DOCUMENT NUMBER: 145:356134
 TITLE: Cu(II)-Catalyzed Selective Aerobic Oxidation of
 Alcohols under Mild Conditions
 AUTHOR(S): Jiang, Nan; Ragauskas, Arthur J.
 CORPORATE SOURCE: Department of Chemistry, Georgia Institute of
 Technology, Atlanta, GA, 30332, USA
 SOURCE: Journal of Organic Chemistry (2006), 71(18), 7087-7090
 CODEN: JOCEAH; ISSN: 0022-3263
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 145:356134

AB An efficient four-component system consisting of acetamido-
 TEMPO/Cu(ClO₄)₂/TMDP/DABCO in DMSO has been developed for room-temperature
 aerobic alc. oxidation Under the optimal conditions, various alcs. could be
 converted into their corresponding aldehydes or ketones in good to
 excellent yields. The newly developed catalytic system could also be
 recycled and reused for three runs without any significant loss of
 catalytic activity.

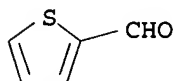
IT 14691-89-5, 4-Acetamido-TEMPO
 RL: CAT (Catalyst use); USES (Uses)
 (preparation of aldehydes or ketones by aerobic alc. oxidation catalyzed by
 acetamido-TEMPO/Cu(ClO₄)₂/TMDP/DABCO in DMSO)
 RN 14691-89-5 HCAPLUS
 CN 1-Piperidinyloxy, 4-(acetylamino)-2,2,6,6-tetramethyl- (CA INDEX NAME)



IT 636-72-6, 2-Thiophenemethanol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of aldehydes or ketones by aerobic alc. oxidation catalyzed by
 acetamido-TEMPO/Cu(ClO₄)₂/TMDP/DABCO in DMSO)
 RN 636-72-6 HCAPLUS
 CN 2-Thiophenemethanol (CA INDEX NAME)



IT 98-03-3P, 2-Formylthiophene
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of aldehydes or ketones by aerobic alc. oxidation catalyzed by
 acetamido-TEMPO/Cu(ClO₄)₂/TMDP/DABCO in DMSO)
 RN 98-03-3 HCAPLUS
 CN 2-Thiophenecarboxaldehyde (CA INDEX NAME)



REFERENCE COUNT: 80 THERE ARE 80 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L67 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2006:669406 HCAPLUS
 DOCUMENT NUMBER: 145:166657
 TITLE: Process for preparation of aldehydes and ketones from
 alcohols by oxidation with air
 INVENTOR(S): Liu, Renhua; Hu, Xinquan; Dong, Chunyan; Liang,
 Xinmiao
 PATENT ASSIGNEE(S): Dalian Institute of Chemical Physics, Chinese Academy
 of Sciences, Peop. Rep. China
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 9 pp.
 CODEN: CNXXEV
 DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1796349	A	20060705	CN 2004-10101893	20041230
PRIORITY APPLN. INFO.:			CN 2004-10101893	20041230

OTHER SOURCE(S): CASREACT 145:166657

AB The method comprises oxidizing alc. with air in the presence of 0.2 mol%
 TEMPO free radical or its derivative, 4-10 mol% active bromine
 (1,3-dibromo-5,5-dimethylhydantoin, N-bromosuccinimide, or pyridinium
 tribromide) and 4-10 mol% nitrite (sodium nitrite or potassium nitrite) in
 1-5 mL water and 100 mL dichloromethane at 100°C and 0.4-0.9 Mpa
 for 1-10 h. The alc. can be benzyl alc., 4-methylbenzyl alc.,
 3-methylbenzyl alc., 2-methylbenzyl alc., 4-chlorobenzyl alc.,
 3-chlorobenzyl alc., 2-chlorobenzyl alc., α-methylbenzyl alc.,
 3-pyridinemethanol, 2-thiophenemethanol, cyclohexanol, octanol, or
 menthol.

IT 2564-83-2, 2,2,6,6-Tetramethylpiperidine N-oxy 14691-89-5

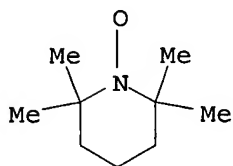
54052-87-8

RL: CAT (Catalyst use); USES (Uses)

(preparation of aldehydes and ketones from alcs. by oxidation with air)

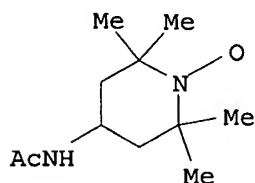
RN 2564-83-2 HCAPLUS

CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



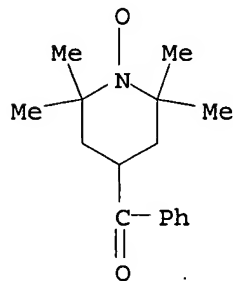
RN 14691-89-5 HCAPLUS

CN 1-Piperidinyloxy, 4-(acetylamino)-2,2,6,6-tetramethyl- (CA INDEX NAME)



RN 54052-87-8 HCAPLUS

CN 1-Piperidinyloxy, 4-benzoyl-2,2,6,6-tetramethyl- (9CI) (CA INDEX NAME)



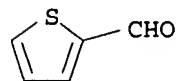
IT 98-03-3P, 2-Thiophenealdehyde

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(preparation of aldehydes and ketones from alcs. by oxidation with air)

RN 98-03-3 HCAPLUS

CN 2-Thiophenecarboxaldehyde (CA INDEX NAME)



IT 636-72-6, 2-Thiophenemethanol

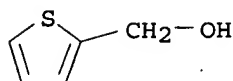
RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of aldehydes and ketones from alcs. by oxidation with air)

RN 636-72-6 HCAPLUS

Updated Search

CN 2-Thiophenemethanol (CA INDEX NAME)



L67 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN

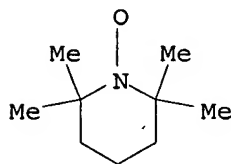
ACCESSION NUMBER: 2006:624725 HCAPLUS
DOCUMENT NUMBER: 145:124320
TITLE: Process for preparation of aromatic aldehydes and ketones by catalytic oxidation in aqueous solution
INVENTOR(S): Hu, Xinqun; Liu, Renhua; Dong, Chunyan; Liang, Xinmiao
PATENT ASSIGNEE(S): Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 10 pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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CN 1789225	A	20060621	CN 2004-10098936	20041216
PRIORITY APPLN. INFO.:			CN 2004-10098936	20041216
OTHER SOURCE(S):	CASREACT 145:124320			

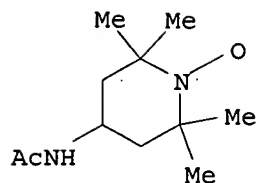
AB The invention pertains to a method for catalytically oxidizing arylmethanol to aryl aldehyde or ketone by air at 40-120 °C for 1.5-16 h at 0.1-1.2 MPa, in which 2,2,6,6-tetramethylpiperidiny-1-oxy (TEMPO) or its derivs., nitrites e.g. sodium nitrite or potassium nitrite, and active bromide to produce hypobromous acid in situ e.g. 1,3-dibromo-5,5-dimethyl-hydantoin, N-bromosuccinimide, pyridinium tribromide etc. at a molar ratio of 1:2-4:4 are used as catalysts. The molar ratio of TEMPO or its derivative and arylmethanol is about 1:100.

IT 2564-83-2, 2,2,6,6-Tetramethylpiperidiny-1-oxy 14691-89-5
, 4-(Acetylamino)-2,2,6,6-tetramethylpiperidiny-1-oxy 54052-87-8
, 4-Benzoyl-2,2,6,6-tetramethylpiperidiny-1-oxy
RL: CAT (Catalyst use); USES (Uses)
(preparation of aromatic aldehydes and ketones by catalytic oxidation in aqueous solution)

RN 2564-83-2 HCAPLUS
CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)

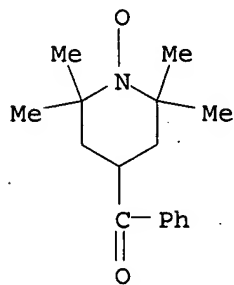


RN 14691-89-5 HCAPLUS
CN 1-Piperidinyloxy, 4-(acetylamino)-2,2,6,6-tetramethyl- (CA INDEX NAME)



RN 54052-87-8 HCAPLUS

CN 1-Piperidinyloxy, 4-benzoyl-2,2,6,6-tetramethyl- (9CI) (CA INDEX NAME)



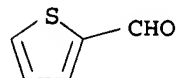
IT 98-03-3P, 2-Thienyl aldehyde

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(preparation of aromatic aldehydes and ketones by catalytic oxidation in aqueous solution)

RN 98-03-3 HCAPLUS

CN 2-Thiophenecarboxaldehyde (CA INDEX NAME)



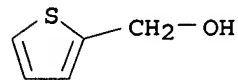
IT 636-72-6, 2-Thienyl methanol

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of aromatic aldehydes and ketones by catalytic oxidation in aqueous solution)

RN 636-72-6 HCAPLUS

CN 2-Thiophenemethanol (CA INDEX NAME)



L67 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:284083 HCAPLUS

DOCUMENT NUMBER: 145:7498

TITLE: Catalyst system and method for preparation of aldehyde and ketone from alcohol

INVENTOR(S): Liu, Renhua; Hu, Xinquan; Dong, Chunyan; Liang,

Updated Search

PATENT ASSIGNEE(S): Xinmiao
 Dalian Institute of Chemical Physics, Chinese Academy
 of Sciences, Peop. Rep. China
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 12 pp.
 CODEN: CNXXEV
 DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1651381	A	20050810	CN 2004-10003791	20040205
PRIORITY APPLN. INFO.:			CN 2004-10003791	20040205

OTHER SOURCE(S): CASREACT 145:7498

AB This invention pertains to catalyst system for preparing aldehyde and ketone from alc., and the catalyst system comprises oxidizing agent and catalyst of 2,2,6,6-tetramethyl-1-piperidinyloxy, halogen, and nitrite. The 2,2,6,6-tetra-Me piperidine-oxo free radical is 4-benzoyl-2,2,6,6-tetramethylpiperidinyloxy, or 4-acetylamino-2,2,6,6-tetramethylpiperidinyloxy. The method for preparing aldehyde and ketone from alc. comprises mixing alc. and catalyst system and reacting at 40-120°C and 0.1-1.0MPa for 0.5-8 h. The alc. is primary alc. of substituted benzyl alc., fatty primary alc. and/or N, S heteroaryl substituted methanol; secondary alc. of aryl substituted secondary alc., fatty secondary alc. or/and alicyclic alc.

IT 2564-83-2, Tempo 14691-89-5 54052-87-8

RL: CAT (Catalyst use); USES (Uses)

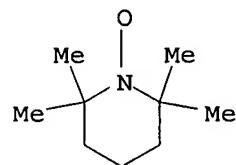
(preparation of aldehyde and ketone by oxidation of alc. in presence of

TEMPO,

nitrite, and halogen)

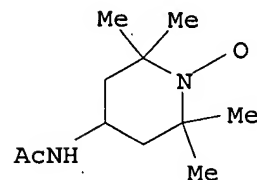
RN 2564-83-2 HCAPLUS

CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



RN 14691-89-5 HCAPLUS

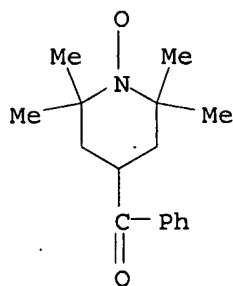
CN 1-Piperidinyloxy, 4-(acetylamino)-2,2,6,6-tetramethyl- (CA INDEX NAME)



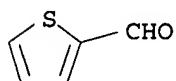
RN 54052-87-8 HCAPLUS

CN 1-Piperidinyloxy, 4-benzoyl-2,2,6,6-tetramethyl- (9CI) (CA INDEX NAME)

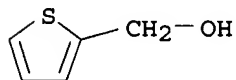
Updated Search



IT 98-03-3P, 2-Thiophenecarboxaldehyde
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP
 (Preparation)
 (preparation of aldehyde and ketone by oxidation of alc. in presence of
 TEMPO,
 nitrite, and halogen)
 RN 98-03-3 HCAPLUS
 CN 2-Thiophenecarboxaldehyde (CA INDEX NAME)



IT 636-72-6, 2-Thiophenemethanol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of aldehyde and ketone by oxidation of alc. in presence of
 TEMPO,
 nitrite, and halogen)
 RN 636-72-6 HCAPLUS
 CN 2-Thiophenemethanol (CA INDEX NAME)



L67 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2005:1148403 HCAPLUS
 DOCUMENT NUMBER: 144:51217
 TITLE: NaNO2-activated, iron-TEMPO catalyst system for
 aerobic alcohol oxidation under mild conditions
 AUTHOR(S): Wang, Naiwei; Liu, Renhua; Chen, Jiping; Liang,
 Xinmiao
 CORPORATE SOURCE: Dalian Institute of Chemical Physics, Chinese Academy
 of Sciences, Dalian, 116023, Peop. Rep. China
 SOURCE: Chemical Communications (Cambridge, United Kingdom)
 (2005), (42), 5322-5324
 CODEN: CHCOFS; ISSN: 1359-7345
 PUBLISHER: Royal Society of Chemistry
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 144:51217
 AB FeCl3-TEMPO-NaNO2 catalyzes the selective and mild aerobic oxidation of a
 broad range of alcs. to the corresponding aldehydes and ketones.
 IT 2564-83-2, Tempo

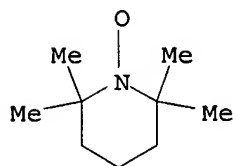
Updated Search

RL: CAT (Catalyst use); USES (Uses)

(preparation of aldehydes and ketones via FeCl₃-TEMPO-NaNO₂ catalyzed selective aerobic oxidation of alcs.)

RN 2564-83-2 HCAPLUS

CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



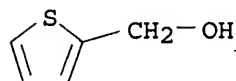
IT 636-72-6, 2-Hydroxymethylthiophene

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of aldehydes and ketones via FeCl₃-TEMPO-NaNO₂ catalyzed selective aerobic oxidation of alcs.)

RN 636-72-6 HCAPLUS

CN 2-Thiophenemethanol (CA INDEX NAME)



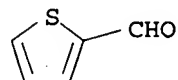
IT 98-03-3P, 2-Thiophenecarboxaldehyde

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of aldehydes and ketones via FeCl₃-TEMPO-NaNO₂ catalyzed selective aerobic oxidation of alcs.)

RN 98-03-3 HCAPLUS

CN 2-Thiophenecarboxaldehyde (CA INDEX NAME)



REFERENCE COUNT:

28

THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L67 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:1148813 HCAPLUS

DOCUMENT NUMBER: 142:74314

TITLE: Highly Efficient Catalytic Aerobic Oxidations of Benzylic Alcohols in Water

AUTHOR(S): Liu, Renhua; Dong, Chunyan; Liang, Xinmiao; Wang, Xiujuan; Hu, Xinquan

CORPORATE SOURCE: Dalian Institute of Chemical Physics, the Chinese Academy of Sciences, Dalian, 116023, Peop. Rep. China

SOURCE: Journal of Organic Chemistry (2005), 70(2), 729-731
CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 142:74314

AB A highly efficient catalytic system without transition metals in water has been developed for aerobic oxidns. of benzylic alcs. The newly developed

Updated Search

catalyst system oxidized benzylic alcs. and heteroarom. analogs with 1 mol % TEMPO as a catalyst and with a catalytic amount of 1,3-dibromo-5,5-dimethylhydantoin and NaNO₂ as cocatalysts. Under the optimal conditions, various alcs. were converted into their corresponding aldehydes or ketones in high yields.

IT 2564-83-2, TEMPO

RL: CAT (Catalyst use); USES (Uses)

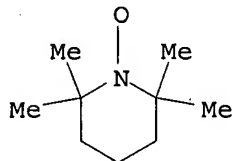
(preparation of carbonyl compound via catalytic aerobic oxidation of alcs.

with

TEMPO in water)

RN 2564-83-2 HCAPLUS

CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



IT 636-72-6, 2-Thiophenemethanol

RL: RCT (Reactant); RACT (Reactant or reagent)

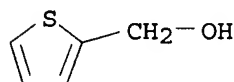
(preparation of carbonyl compound via catalytic aerobic oxidation of alcs.

with

TEMPO in water)

RN 636-72-6 HCAPLUS

CN 2-Thiophenemethanol (CA INDEX NAME)



IT 98-03-3P, 2-Thiophenecarboxaldehyde

RL: SPN (Synthetic preparation); PREP (Preparation)

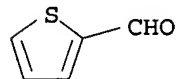
(preparation of carbonyl compound via catalytic aerobic oxidation of alcs.

with

TEMPO in water)

RN 98-03-3 HCAPLUS

CN 2-Thiophenecarboxaldehyde (CA INDEX NAME)



REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L67 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:199180 HCAPLUS

DOCUMENT NUMBER: 140:391051

TITLE: Transition-Metal-Free: A Highly Efficient Catalytic Aerobic Alcohol Oxidation Process

AUTHOR(S): Liu, Renhua; Liang, Xinmiao; Dong, Chunyan; Hu, Xinquan

CORPORATE SOURCE: Dalian Institute of Chemical Physics, Chinese Academy

Updated Search

SOURCE: of Sciences, Dalian, 116023, Peop. Rep. China
Journal of the American Chemical Society (2004),
126(13), 4112-4113
CODEN: JACSAT; ISSN: 0002-7863

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

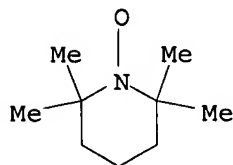
OTHER SOURCE(S): CASREACT 140:391051

AB A highly efficient catalytic system without transition metals has been developed for aerobic alc. oxidns. Under the optimal reaction conditions, various alc. substrates were converted into their corresponding carbonyl compds. by air with TEMPO/Br₂/NaNO₂ as catalyst.

IT 2564-83-2, TEMPO
RL: CAT (Catalyst use); USES (Uses)
(preparation of aldehydes and ketones via transition metal free aerobic oxidation of alcs. catalyzed by TEMPO/Br₂/NaNO₂)

RN 2564-83-2 HCAPLUS

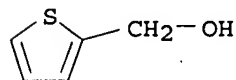
CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



IT 636-72-6, 2-Thiophenylmethanol
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of aldehydes and ketones via transition metal free aerobic oxidation of alcs. catalyzed by TEMPO/Br₂/NaNO₂)

RN 636-72-6 HCAPLUS

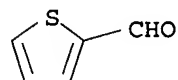
CN 2-Thiophenemethanol (CA INDEX NAME)



IT 98-03-3P, 2-Thiophenecarboxaldehyde
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of aldehydes and ketones via transition metal free aerobic oxidation of alcs. catalyzed by TEMPO/Br₂/NaNO₂)

RN 98-03-3 HCAPLUS

CN 2-Thiophenecarboxaldehyde (CA INDEX NAME)



REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> file caold
COST IN U.S. DOLLARS

SINCE FILE TOTAL
ENTRY SESSION

Updated Search

FULL ESTIMATED COST	52.63	2002.26
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-7.02	-23.40

FILE 'CAOLD' ENTERED AT 17:01:52 ON 11 OCT 2007
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FILE COVERS 1907-1966
 FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE display formats.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

=> d his

(FILE 'HOME' ENTERED AT 16:12:38 ON 11 OCT 2007)

FILE 'REGISTRY' ENTERED AT 16:13:27 ON 11 OCT 2007
 E UNDECANOL/CN

L1 2 S E3

FILE 'REGISTRY' ENTERED AT 16:21:06 ON 11 OCT 2007

L2 STRUCTURE UPLOADED

L3 9 S L2

L4 STRUCTURE UPLOADED

L5 4 S L4

L6 STRUCTURE UPLOADED

L7 13 S L6

L8 1553 S L6 FULL

FILE 'HCAPLUS' ENTERED AT 16:26:51 ON 11 OCT 2007

L9 1262 S L8/PREP

FILE 'REGISTRY' ENTERED AT 16:27:02 ON 11 OCT 2007

L10 STRUCTURE UPLOADED

L11 50 S L10

L12 3368 S L10 FULL

FILE 'HCAPLUS' ENTERED AT 16:28:36 ON 11 OCT 2007

L13 2593 S L12/RCT

L14 470 S L13 AND L9

FILE 'REGISTRY' ENTERED AT 16:29:01 ON 11 OCT 2007

L15 STRUCTURE UPLOADED

L16 50 S L15

L17 8707 S L15 FULL

Updated Search

FILE 'HCAPLUS' ENTERED AT 16:31:15 ON 11 OCT 2007
 L18 10014 S L17
 L19 3 S L18 AND L14

 FILE 'REGISTRY' ENTERED AT 16:31:58 ON 11 OCT 2007

 FILE 'CAOLD' ENTERED AT 16:32:00 ON 11 OCT 2007
 L20 0 S L8 AND L12 AND L17

 FILE 'REGISTRY' ENTERED AT 16:33:28 ON 11 OCT 2007
 L21 STRUCTURE UPLOADED
 L22 6 S L21
 L23 6 S L22
 L24 1936 S L22 FULL

 FILE 'HCAPLUS' ENTERED AT 16:35:35 ON 11 OCT 2007
 L25 1504 S L24/PREP

 FILE 'REGISTRY' ENTERED AT 16:35:41 ON 11 OCT 2007
 L26 STRUCTURE UPLOADED
 L27 32 S L26
 L28 6553 S L26 FULL

 FILE 'HCAPLUS' ENTERED AT 16:37:09 ON 11 OCT 2007
 L29 2704 S L28/RCT
 L30 451 S L29 AND L25
 L31 451 S L24 AND L30
 L32 16 S L30 AND L17
 L33 1 S L32 AND SHIOMI, Y?/AU
 L34 1 S L32 AND UNO, O?/AU
 L35 0 S L34 NOT L33
 L36 15 S L32 NOT L33
 L37 0 S L36 AND OHTA, A?/AU
 L38 0 S L36 AND SUNAKAMI, T?/AU

 FILE 'CAOLD' ENTERED AT 16:40:35 ON 11 OCT 2007
 L39 0 S L28 AND L17

 FILE 'REGISTRY' ENTERED AT 16:42:21 ON 11 OCT 2007
 L40 STRUCTURE UPLOADED
 L41 11 S L40
 L42 2565 S L40 FULL

 FILE 'HCAPLUS' ENTERED AT 16:43:51 ON 11 OCT 2007
 L43 1369 S L42/RCT

 FILE 'REGISTRY' ENTERED AT 16:43:58 ON 11 OCT 2007
 L44 STRUCTURE UPLOADED
 L45 7 S L44
 L46 1282 S L44 FULL

 FILE 'HCAPLUS' ENTERED AT 16:45:12 ON 11 OCT 2007
 L47 1170 S L46/PREP
 L48 2 S L47 AND L43 AND L17

 FILE 'CAOLD' ENTERED AT 16:45:42 ON 11 OCT 2007
 L49 0 S L46 AND L42 AND L17

 FILE 'CASREACT' ENTERED AT 16:47:37 ON 11 OCT 2007
 L50 STRUCTURE UPLOADED
 L51 0 S L50

Updated Search

L52 0 S L50 FULL
L53 STRUCTURE UPLOADED
L54 0 S L53
L55 0 S L53 FULL

FILE 'REGISTRY' ENTERED AT 16:56:44 ON 11 OCT 2007

L56 STRUCTURE UPLOADED
L57 7 S L56
L58 STRUCTURE UPLOADED
L59 25 S L58
L60 3417 S L58 FULL

FILE 'HCAPLUS' ENTERED AT 16:59:27 ON 11 OCT 2007

L61 2159 S L60/PREP
L62 11 S L61 AND L17

FILE 'REGISTRY' ENTERED AT 16:59:46 ON 11 OCT 2007

L63 STRUCTURE UPLOADED
L64 8 S L63
L65 976 S L63 FULL

FILE 'HCAPLUS' ENTERED AT 17:00:57 ON 11 OCT 2007

L66 985 S L65/RCT
L67 9 S L66 AND L62
L68 0 S L67 AND SHIOMI, Y?/AU
L69 0 S L67 AND UNO, O?/AU
L70 0 S L67 AND OHTA, A?/AU
L71 0 S L67 AND SUNAKAMI, T?/AU

FILE 'CAOLD' ENTERED AT 17:01:52 ON 11 OCT 2007

=> s l65 and l60 and l17

50 L65
153 L60
82 L17
L72 0 L65 AND L60 AND L17

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.45	2002.71
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-23.40

FILE 'REGISTRY' ENTERED AT 17:02:43 ON 11 OCT 2007

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STRUCTURE FILE UPDATES: 10 OCT 2007 HIGHEST RN 950149-06-1
DICTIONARY FILE UPDATES: 10 OCT 2007 HIGHEST RN 950149-06-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Updated Search

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=>
Uploading C:\Documents and Settings\brobinson1\My Documents\stnweb\Queries\a65tgbv.str

L73 STRUCTURE UPLOADED

=> d 173
L73 HAS NO ANSWERS
L73 STR
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

Structure attributes must be viewed using STN Express query preparation.

=> s 173
SAMPLE SEARCH INITIATED 17:03:34 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 10361 TO ITERATE

19.3% PROCESSED 2000 ITERATIONS 2 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
 BATCH **COMPLETE**
PROJECTED ITERATIONS: 201120 TO 213320
PROJECTED ANSWERS: 14 TO 400

L74 2 SEA SSS SAM L73

=> s 173 full
THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 171.65 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y
FULL SEARCH INITIATED 17:03:39 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 206136 TO ITERATE

100.0% PROCESSED 206136 ITERATIONS 500 ANSWERS
SEARCH TIME: 00.00.03

L75 500 SEA SSS FUL L73

=> file hcaplus		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	172.55	2175.26
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-23.40

FILE 'HCAPLUS' ENTERED AT 17:03:45 ON 11 OCT 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

Updated Search

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FILE COVERS 1907 - 11 Oct 2007 VOL 147 ISS 16
FILE LAST UPDATED: 10 Oct 2007 (20071010/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 175/rct
708 L75
3023813 RCT/RL
L76 541 L75/RCT
(L75 (L) RCT/RL)

=> file reg		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	2.60	2177.86
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-23.40

FILE 'REGISTRY' ENTERED AT 17:03:53 ON 11 OCT 2007.
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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STRUCTURE FILE UPDATES: 10 OCT 2007 HIGHEST RN 950149-06-1
DICTIONARY FILE UPDATES: 10 OCT 2007 HIGHEST RN 950149-06-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

Updated Search

=>
Uploading C:\Documents and Settings\brobinson1\My
Documents\stnweb\Queries\awdsfhnjm.str

L77 STRUCTURE UPLOADED

=> d 177
L77 HAS NO ANSWERS
L77 STR
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

Structure attributes must be viewed using STN Express query preparation.

=> s 177 full
THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 171.65 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y
FULL SEARCH INITIATED 17:04:56 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 248434 TO ITERATE

100.0% PROCESSED 248434 ITERATIONS 712 ANSWERS
SEARCH TIME: 00.00.03

L78 712 SEA SSS FUL L77

=> d his

(FILE 'HOME' ENTERED AT 16:12:38 ON 11 OCT 2007)

FILE 'REGISTRY' ENTERED AT 16:13:27 ON 11 OCT 2007
E UNDECANOL/CN

L1 2 S E3

FILE 'REGISTRY' ENTERED AT 16:21:06 ON 11 OCT 2007

L2 STRUCTURE UPLOADED

L3 9 S L2

L4 STRUCTURE UPLOADED

L5 4 S L4

L6 STRUCTURE UPLOADED

L7 13 S L6

L8 1553 S L6 FULL

FILE 'HCAPLUS' ENTERED AT 16:26:51 ON 11 OCT 2007

L9 1262 S L8/PREP

FILE 'REGISTRY' ENTERED AT 16:27:02 ON 11 OCT 2007

L10 STRUCTURE UPLOADED

L11 50 S L10

L12 3368 S L10 FULL

FILE 'HCAPLUS' ENTERED AT 16:28:36 ON 11 OCT 2007

L13 2593 S L12/RCT

L14 470 S L13 AND L9

FILE 'REGISTRY' ENTERED AT 16:29:01 ON 11 OCT 2007

L15 STRUCTURE UPLOADED

L16 50 S L15

L17 8707 S L15 FULL

FILE 'HCAPLUS' ENTERED AT 16:31:15 ON 11 OCT 2007

Updated Search

L18 10014 S L17
 L19 3 S L18 AND L14

 FILE 'REGISTRY' ENTERED AT 16:31:58 ON 11 OCT 2007

 FILE 'CAOLD' ENTERED AT 16:32:00 ON 11 OCT 2007
 L20 0 S L8 AND L12 AND L17

 FILE 'REGISTRY' ENTERED AT 16:33:28 ON 11 OCT 2007
 L21 STRUCTURE UPLOADED
 L22 6 S L21
 L23 6 S L22
 L24 1936 S L22 FULL

 FILE 'HCAPLUS' ENTERED AT 16:35:35 ON 11 OCT 2007
 L25 1504 S L24/PREP

 FILE 'REGISTRY' ENTERED AT 16:35:41 ON 11 OCT 2007
 L26 STRUCTURE UPLOADED
 L27 32 S L26
 L28 6553 S L26 FULL

 FILE 'HCAPLUS' ENTERED AT 16:37:09 ON 11 OCT 2007
 L29 2704 S L28/RCT
 L30 451 S L29 AND L25
 L31 451 S L24 AND L30
 L32 16 S L30 AND L17
 L33 1 S L32 AND SHIOMI, Y?/AU
 L34 1 S L32 AND UNO, O?/AU
 L35 0 S L34 NOT L33
 L36 15 S L32 NOT L33
 L37 0 S L36 AND OHTA, A?/AU
 L38 0 S L36 AND SUNAKAMI, T?/AU

 FILE 'CAOLD' ENTERED AT 16:40:35 ON 11 OCT 2007
 L39 0 S L28 AND L17

 FILE 'REGISTRY' ENTERED AT 16:42:21 ON 11 OCT 2007
 L40 STRUCTURE UPLOADED
 L41 11 S L40
 L42 2565 S L40 FULL

 FILE 'HCAPLUS' ENTERED AT 16:43:51 ON 11 OCT 2007
 L43 1369 S L42/RCT

 FILE 'REGISTRY' ENTERED AT 16:43:58 ON 11 OCT 2007
 L44 STRUCTURE UPLOADED
 L45 7 S L44
 L46 1282 S L44 FULL

 FILE 'HCAPLUS' ENTERED AT 16:45:12 ON 11 OCT 2007
 L47 1170 S L46/PREP
 L48 2 S L47 AND L43 AND L17

 FILE 'CAOLD' ENTERED AT 16:45:42 ON 11 OCT 2007
 L49 0 S L46 AND L42 AND L17

 FILE 'CASREACT' ENTERED AT 16:47:37 ON 11 OCT 2007
 L50 STRUCTURE UPLOADED
 L51 0 S L50
 L52 0 S L50 FULL

Updated Search

L53 STRUCTURE UPLOADED
L54 0 S L53
L55 0 S L53 FULL

FILE 'REGISTRY' ENTERED AT 16:56:44 ON 11 OCT 2007

L56 STRUCTURE UPLOADED
L57 7 S L56
L58 STRUCTURE UPLOADED
L59 25 S L58
L60 3417 S L58 FULL

FILE 'HCAPLUS' ENTERED AT 16:59:27 ON 11 OCT 2007

L61 2159 S L60/PREP
L62 11 S L61 AND L17

FILE 'REGISTRY' ENTERED AT 16:59:46 ON 11 OCT 2007

L63 STRUCTURE UPLOADED
L64 8 S L63
L65 976 S L63 FULL

FILE 'HCAPLUS' ENTERED AT 17:00:57 ON 11 OCT 2007

L66 985 S L65/RCT
L67 9 S L66 AND L62
L68 0 S L67 AND SHIOMI, Y?/AU
L69 0 S L67 AND UNO, O?/AU
L70 0 S L67 AND OHTA, A?/AU
L71 0 S L67 AND SUNAKAMI, T?/AU

FILE 'CAOLD' ENTERED AT 17:01:52 ON 11 OCT 2007

L72 0 S L65 AND L60 AND L17

FILE 'REGISTRY' ENTERED AT 17:02:43 ON 11 OCT 2007

L73 STRUCTURE UPLOADED
L74 2 S L73
L75 500 S L73 FULL

FILE 'HCAPLUS' ENTERED AT 17:03:45 ON 11 OCT 2007

L76 541 S L75/RCT

FILE 'REGISTRY' ENTERED AT 17:03:53 ON 11 OCT 2007

L77 STRUCTURE UPLOADED
L78 712 S L77 FULL

=> file hacplus

'HACPLUS' IS NOT A VALID FILE NAME

SESSION CONTINUES IN FILE 'REGISTRY'

Enter "HELP FILE NAMES" at an arrow prompt (=>) for a list of files that are available. If you have requested multiple files, you can specify a corrected file name or you can enter "IGNORE" to continue accessing the remaining file names entered.

=> file hacplus

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
172.55	2350.41

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
0.00	-23.40

CA SUBSCRIBER PRICE

FILE 'HCAPLUS' ENTERED AT 17:05:07 ON 11 OCT 2007

Updated Search

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FILE COVERS 1907 - 11 Oct 2007 VOL 147 ISS 16
FILE LAST UPDATED: 10 Oct 2007 (20071010/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

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=> s 178/prep
      1962 L78
      4473482 PREP/RL
L79      557 L78/PREP
          (L78 (L) PREP/RL)
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=> d his

(FILE 'HOME' ENTERED AT 16:12:38 ON 11 OCT 2007)

FILE 'REGISTRY' ENTERED AT 16:13:27 ON 11 OCT 2007
E UNDECANOL/CN

L1 2 S E3

FILE 'REGISTRY' ENTERED AT 16:21:06 ON 11 OCT 2007

```
L2      STRUCTURE UPLOADED
L3      9 S L2
L4      STRUCTURE UPLOADED
L5      4 S L4
L6      STRUCTURE UPLOADED
L7      13 S L6
L8      1553 S L6 FULL
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FILE 'HCAPLUS' ENTERED AT 16:26:51 ON 11 OCT 2007

L9 1262 S L8/PREP

FILE 'REGISTRY' ENTERED AT 16:27:02 ON 11 OCT 2007

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L10     STRUCTURE UPLOADED
L11     50 S L10
L12     3368 S L10 FULL
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FILE 'HCAPLUS' ENTERED AT 16:28:36 ON 11 OCT 2007

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L13     2593 S L12/RCT
L14     470 S L13 AND L9
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FILE 'REGISTRY' ENTERED AT 16:29:01 ON 11 OCT 2007

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L15     STRUCTURE UPLOADED
L16     50 S L15
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Updated Search

L17 8707 S L15 FULL

 FILE 'HCAPLUS' ENTERED AT 16:31:15 ON 11 OCT 2007
 L18 10014 S L17
 L19 3 S L18 AND L14

 FILE 'REGISTRY' ENTERED AT 16:31:58 ON 11 OCT 2007

 FILE 'CAOLD' ENTERED AT 16:32:00 ON 11 OCT 2007
 L20 0 S L8 AND L12 AND L17

 FILE 'REGISTRY' ENTERED AT 16:33:28 ON 11 OCT 2007
 L21 STRUCTURE UPLOADED
 L22 6 S L21
 L23 6 S L22
 L24 1936 S L22 FULL

 FILE 'HCAPLUS' ENTERED AT 16:35:35 ON 11 OCT 2007
 L25 1504 S L24/PREP

 FILE 'REGISTRY' ENTERED AT 16:35:41 ON 11 OCT 2007
 L26 STRUCTURE UPLOADED
 L27 32 S L26
 L28 6553 S L26 FULL

 FILE 'HCAPLUS' ENTERED AT 16:37:09 ON 11 OCT 2007
 L29 2704 S L28/RCT
 L30 451 S L29 AND L25
 L31 451 S L24 AND L30
 L32 16 S L30 AND L17
 L33 1 S L32 AND SHIOMI, Y?/AU
 L34 1 S L32 AND UNO, O?/AU
 L35 0 S L34 NOT L33
 L36 15 S L32 NOT L33
 L37 0 S L36 AND OHTA, A?/AU
 L38 0 S L36 AND SUNAKAMI, T?/AU

 FILE 'CAOLD' ENTERED AT 16:40:35 ON 11 OCT 2007
 L39 0 S L28 AND L17

 FILE 'REGISTRY' ENTERED AT 16:42:21 ON 11 OCT 2007
 L40 STRUCTURE UPLOADED
 L41 11 S L40
 L42 2565 S L40 FULL

 FILE 'HCAPLUS' ENTERED AT 16:43:51 ON 11 OCT 2007
 L43 1369 S L42/RCT

 FILE 'REGISTRY' ENTERED AT 16:43:58 ON 11 OCT 2007
 L44 STRUCTURE UPLOADED
 L45 7 S L44
 L46 1282 S L44 FULL

 FILE 'HCAPLUS' ENTERED AT 16:45:12 ON 11 OCT 2007
 L47 1170 S L46/PREP
 L48 2 S L47 AND L43 AND L17

 FILE 'CAOLD' ENTERED AT 16:45:42 ON 11 OCT 2007
 L49 0 S L46 AND L42 AND L17

 FILE 'CASREACT' ENTERED AT 16:47:37 ON 11 OCT 2007

L50 STRUCTURE UPLOADED
L51 0 S L50
L52 0 S L50 FULL
L53 STRUCTURE UPLOADED
L54 0 S L53
L55 0 S L53 FULL

FILE 'REGISTRY' ENTERED AT 16:56:44 ON 11 OCT 2007

L56 STRUCTURE UPLOADED
L57 7 S L56
L58 STRUCTURE UPLOADED
L59 25 S L58
L60 3417 S L58 FULL

FILE 'HCAPLUS' ENTERED AT 16:59:27 ON 11 OCT 2007

L61 2159 S L60/PREP
L62 11 S L61 AND L17

FILE 'REGISTRY' ENTERED AT 16:59:46 ON 11 OCT 2007

L63 STRUCTURE UPLOADED
L64 8 S L63
L65 976 S L63 FULL

FILE 'HCAPLUS' ENTERED AT 17:00:57 ON 11 OCT 2007

L66 985 S L65/RCT
L67 9 S L66 AND L62
L68 0 S L67 AND SHIOMI, Y?/AU
L69 0 S L67 AND UNO, O?/AU
L70 0 S L67 AND OHTA, A?/AU
L71 0 S L67 AND SUNAKAMI, T?/AU

FILE 'CAOLD' ENTERED AT 17:01:52 ON 11 OCT 2007

L72 0 S L65 AND L60 AND L17

FILE 'REGISTRY' ENTERED AT 17:02:43 ON 11 OCT 2007

L73 STRUCTURE UPLOADED
L74 2 S L73
L75 500 S L73 FULL

FILE 'HCAPLUS' ENTERED AT 17:03:45 ON 11 OCT 2007

L76 541 S L75/RCT

FILE 'REGISTRY' ENTERED AT 17:03:53 ON 11 OCT 2007

L77 STRUCTURE UPLOADED
L78 712 S L77 FULL

FILE 'HCAPLUS' ENTERED AT 17:05:07 ON 11 OCT 2007

L79 557 S L78/PREP

=> s l79 and l76 and l17

10014 L17

L80 1 L79 AND L76 AND L17

=> d l80, ibib abs hitstr

L80 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:777759 HCAPLUS

DOCUMENT NUMBER: 139:276804

TITLE: Process for producing heterocyclic aldehyde

INVENTOR(S): Shiomi, Yasuhiro; Uno, Osamu; Ohta, Akio; Sunakami, Takeshi

Updated Search

PATENT ASSIGNEE(S): Koei Chemical Co., Ltd., Japan
 SOURCE: PCT Int. Appl., 48 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003080575	A1	20031002	WO 2003-JP3568	20030325
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003221048	A1	20031008	AU 2003-221048	20030325
GB 2404190	A	20050126	GB 2004-21452	20030325
US 2005124807	A1	20050609	US 2003-509228	20030325
PRIORITY APPLN. INFO.:			JP 2002-86974	A 20020326
			WO 2003-JP3568	W 20030325

OTHER SOURCE(S): MARPAT 139:276804

AB The patent relates to a process in which a heterocyclic alc. is oxidized to produce a heterocyclic aldehyde with high selectivity in high yield. The process comprises reacting a heterocyclic compound having per mol. at least one hydroxymethyl group bonded to a carbon atom of the heterocycle with a hypohalogenous acid salt in the presence of a base to oxidize the hydroxymethyl group to thereby produce the corresponding heterocyclic aldehyde, wherein the reaction is conducted in the presence of a 2,2,6,6-tetramethylpiperidin-1-oxyl derivative having per mol. two or more 2,2,6,6-tetramethylpiperidin-1-oxyl-4-yl groups. Thus, 3-pyridine-methanol was oxidized by sodium hypochlorite in presence of an oligomer derivative obtained from Chimassorb 944LD with hydrogen peroxide and generated 3-pyridinecarbaldehyde (90.1%) and nicotinic acid (3.4%).

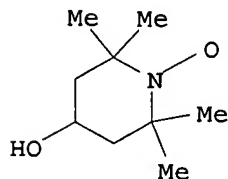
IT 2226-96-2DP, 4-Hydroxy-2,2,6,6-tetramethylpiperidine-N-oxy, reaction product with poly(2-isocyanatoethyl methacrylate)

RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(in preparation of heterocyclic aldehyde)

RN 2226-96-2 HCAPLUS

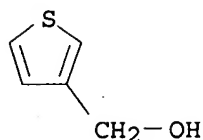
CN 1-Piperidinyloxy, 4-hydroxy-2,2,6,6-tetramethyl- (CA INDEX NAME)



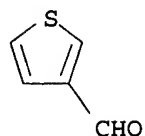
IT 71637-34-8, 3-Thiophenemethanol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (in preparation of heterocyclic aldehyde)

RN 71637-34-8 HCAPLUS

CN 3-Thiophenemethanol (CA INDEX NAME)



IT 498-62-4P, 3-Thiophenecarbaldehyde
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of heterocyclic aldehyde)
RN 498-62-4 HCAPLUS
CN 3-Thiophenecarboxaldehyde (CA INDEX NAME)



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> file caold
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
7.87	2358.28

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-0.78	-24.18

CA SUBSCRIBER PRICE

FILE 'CAOLD' ENTERED AT 17:05:33 ON 11 OCT 2007
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FILE COVERS 1907-1966
FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE display formats.

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This file supports REGlSTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

=> d his

(FILE 'HOME' ENTERED AT 16:12:38 ON 11 OCT 2007)

Updated Search

FILE 'REGISTRY' ENTERED AT 16:13:27 ON 11 OCT 2007
 E UNDECANOL/CN
 L1 2 S E3

FILE 'REGISTRY' ENTERED AT 16:21:06 ON 11 OCT 2007
 L2 STRUCTURE UPLOADED
 L3 9 S L2
 L4 STRUCTURE UPLOADED
 L5 4 S L4
 L6 STRUCTURE UPLOADED
 L7 13 S L6
 L8 1553 S L6 FULL

FILE 'HCAPLUS' ENTERED AT 16:26:51 ON 11 OCT 2007
 L9 1262 S L8/PREP

FILE 'REGISTRY' ENTERED AT 16:27:02 ON 11 OCT 2007
 L10 STRUCTURE UPLOADED
 L11 50 S L10
 L12 3368 S L10 FULL

FILE 'HCAPLUS' ENTERED AT 16:28:36 ON 11 OCT 2007
 L13 2593 S L12/RCT
 L14 470 S L13 AND L9

FILE 'REGISTRY' ENTERED AT 16:29:01 ON 11 OCT 2007
 L15 STRUCTURE UPLOADED
 L16 50 S L15
 L17 8707 S L15 FULL

FILE 'HCAPLUS' ENTERED AT 16:31:15 ON 11 OCT 2007
 L18 10014 S L17
 L19 3 S L18 AND L14

FILE 'REGISTRY' ENTERED AT 16:31:58 ON 11 OCT 2007

FILE 'CAOLD' ENTERED AT 16:32:00 ON 11 OCT 2007
 L20 0 S L8 AND L12 AND L17

FILE 'REGISTRY' ENTERED AT 16:33:28 ON 11 OCT 2007
 L21 STRUCTURE UPLOADED
 L22 6 S L21
 L23 6 S L22
 L24 1936 S L22 FULL

FILE 'HCAPLUS' ENTERED AT 16:35:35 ON 11 OCT 2007
 L25 1504 S L24/PREP

FILE 'REGISTRY' ENTERED AT 16:35:41 ON 11 OCT 2007
 L26 STRUCTURE UPLOADED
 L27 32 S L26
 L28 6553 S L26 FULL

FILE 'HCAPLUS' ENTERED AT 16:37:09 ON 11 OCT 2007
 L29 2704 S L28/RCT
 L30 451 S L29 AND L25
 L31 451 S L24 AND L30
 L32 16 S L30 AND L17
 L33 1 S L32 AND SHIOMI, Y?/AU
 L34 1 S L32 AND UNO, O?/AU

Updated Search

L35 0 S L34 NOT L33
 L36 15 S L32 NOT L33
 L37 0 S L36 AND OHTA, A?/AU
 L38 0 S L36 AND SUNAKAMI, T?/AU

 FILE 'CAOLD' ENTERED AT 16:40:35 ON 11 OCT 2007
 L39 0 S L28 AND L17

 FILE 'REGISTRY' ENTERED AT 16:42:21 ON 11 OCT 2007
 L40 STRUCTURE UPLOADED
 L41 11 S L40
 L42 2565 S L40 FULL

 FILE 'HCAPLUS' ENTERED AT 16:43:51 ON 11 OCT 2007
 L43 1369 S L42/RCT

 FILE 'REGISTRY' ENTERED AT 16:43:58 ON 11 OCT 2007
 L44 STRUCTURE UPLOADED
 L45 7 S L44
 L46 1282 S L44 FULL

 FILE 'HCAPLUS' ENTERED AT 16:45:12 ON 11 OCT 2007
 L47 1170 S L46/PREP
 L48 2 S L47 AND L43 AND L17

 FILE 'CAOLD' ENTERED AT 16:45:42 ON 11 OCT 2007
 L49 0 S L46 AND L42 AND L17

 FILE 'CASREACT' ENTERED AT 16:47:37 ON 11 OCT 2007
 L50 STRUCTURE UPLOADED
 L51 0 S L50
 L52 0 S L50 FULL
 L53 STRUCTURE UPLOADED
 L54 0 S L53
 L55 0 S L53 FULL

 FILE 'REGISTRY' ENTERED AT 16:56:44 ON 11 OCT 2007
 L56 STRUCTURE UPLOADED
 L57 7 S L56
 L58 STRUCTURE UPLOADED
 L59 25 S L58
 L60 3417 S L58 FULL

 FILE 'HCAPLUS' ENTERED AT 16:59:27 ON 11 OCT 2007
 L61 2159 S L60/PREP
 L62 11 S L61 AND L17

 FILE 'REGISTRY' ENTERED AT 16:59:46 ON 11 OCT 2007
 L63 STRUCTURE UPLOADED
 L64 8 S L63
 L65 976 S L63 FULL

 FILE 'HCAPLUS' ENTERED AT 17:00:57 ON 11 OCT 2007
 L66 985 S L65/RCT
 L67 9 S L66 AND L62
 L68 0 S L67 AND SHIOMI, Y?/AU
 L69 0 S L67 AND UNO, O?/AU
 L70 0 S L67 AND OHTA, A?/AU
 L71 0 S L67 AND SUNAKAMI, T?/AU

 FILE 'CAOLD' ENTERED AT 17:01:52 ON 11 OCT 2007

Updated Search

L72 0 S L65 AND L60 AND L17

FILE 'REGISTRY' ENTERED AT 17:02:43 ON 11 OCT 2007

L73 STRUCTURE UPLOADED

L74 2 S L73

L75 500 S L73 FULL

FILE 'HCAPLUS' ENTERED AT 17:03:45 ON 11 OCT 2007

L76 541 S L75/RCT

FILE 'REGISTRY' ENTERED AT 17:03:53 ON 11 OCT 2007

L77 STRUCTURE UPLOADED

L78 712 S L77 FULL

FILE 'HCAPLUS' ENTERED AT 17:05:07 ON 11 OCT 2007

L79 557 S L78/PREP

L80 1 S L79 AND L76 AND L17

FILE 'CAOLD' ENTERED AT 17:05:33 ON 11 OCT 2007

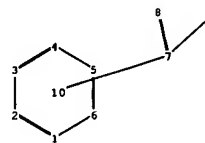
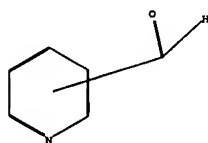
=> s 178 and 175 and 117

44 L78

9 L75

82 L17

L81 0 L78 AND L75 AND L17



chain nodes :

7 8 9

ring nodes :

1 2 3 4 5 6

chain bonds :

7-8 7-9

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6

exact/norm bonds :

7-8

exact bonds :

7-9

normalized bonds :

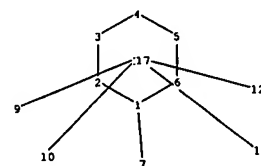
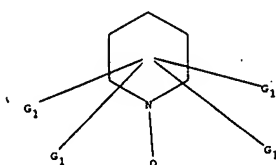
1-2 1-6 2-3 3-4 4-5 5-6

isolated ring systems :

containing 1 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS 10:Atom



chain nodes :

7 9 10 12 13

ring nodes :

1 2 3 4 5 6

chain bonds :

1-7

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6

exact/norm bonds :

1-2 1-6 1-7 2-3 3-4 4-5 5-6

isolated ring systems :

containing 1 :

G1:CH3,Et

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 9:CLASS 10:CLASS 12:CLASS
13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS

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PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

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NEWS 2 JUL 02 LMEDLINE coverage updated
NEWS 3 JUL 02 SCISEARCH enhanced with complete author names
NEWS 4 JUL 02 CHEMCATS accession numbers revised.
NEWS 5 JUL 02 CA/Capplus enhanced with utility model patents from China
NEWS 6 JUL 16 Capplus enhanced with French and German abstracts
NEWS 7 JUL 18 CA/Capplus patent coverage enhanced
NEWS 8 JUL 26 USPATFULL/USPAT2 enhanced with IPC reclassification
NEWS 9 JUL 30 USGENE now available on STN
NEWS 10 AUG 06 CAS REGISTRY enhanced with new experimental property tags
NEWS 11 AUG 06 BEILSTEIN updated with new compounds
NEWS 12 AUG 06 FSTA enhanced with new thesaurus edition
NEWS 13 AUG 13 CA/Capplus enhanced with additional kind codes for granted
patents
NEWS 14 AUG 20 CA/Capplus enhanced with CAS indexing in pre-1907 records
NEWS 15 AUG 27 Full-text patent databases enhanced with predefined
patent family display formats from INPADOCDB
NEWS 16 AUG 27 USPATOLD now available on STN
NEWS 17 AUG 28 CAS REGISTRY enhanced with additional experimental
spectral property data
NEWS 18 SEP 07 STN AnaVist, Version 2.0, now available with Derwent
World Patents Index
NEWS 19 SEP 13 FORIS renamed to SOFIS
NEWS 20 SEP 13 INPADOCDB enhanced with monthly SDI frequency
NEWS 21 SEP 17 CA/Capplus enhanced with printed CA page images from
1967-1998
NEWS 22 SEP 17 Capplus coverage extended to include traditional medicine
patents
NEWS 23 SEP 24 EMBASE, EMBAL, and LEMBASE reloaded with enhancements

NEWS EXPRESS 19 SEPTEMBER 2007: CURRENT WINDOWS VERSION IS V8.2,
CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007.

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Updated Search

* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 01:10:45 ON 27 SEP 2007

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

1.47

1.47

FILE 'REGISTRY' ENTERED AT 01:14:37 ON 27 SEP 2007

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DICTIONARY FILE UPDATES: 25 SEP 2007 HIGHEST RN 948051-90-9

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<http://www.cas.org/support/stngen/stndoc/properties.html>

=>

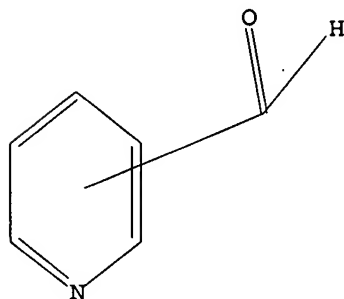
Uploading C:\Documents and Settings\brobinson1\My Documents\stnweb\Queries\aserwer.str

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

Updated Search

=> s l1
SAMPLE SEARCH INITIATED 01:16:33 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 138594 TO ITERATE

1.4% PROCESSED 2000 ITERATIONS 4 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **INCOMPLETE**
BATCH **INCOMPLETE**
PROJECTED ITERATIONS: 2749881 TO 2793879
PROJECTED ANSWERS: 4545 TO 6541

L2 4 SEA SSS SAM L1

=> file reg
COST IN U.S. DOLLARS
FULL ESTIMATED COST

	SINCE FILE ENTRY	TOTAL SESSION
	1.80	3.27

FILE 'REGISTRY' ENTERED AT 01:17:18 ON 27 SEP 2007
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on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=> set postings on
SET COMMAND COMPLETED

=> s pyridine and aldehyde
956939 PYRIDINE
3 PYRIDINES
956939 PYRIDINE
(PYRIDINE OR PYRIDINES)
323365 ALDEHYDE
24 ALDEHYDES
323365 ALDEHYDE
(ALDEHYDE OR ALDEHYDES)
L3 13671 PYRIDINE AND ALDEHYDE

=> s aldehyde?
L4 323365 ALDEHYDE?

Updated Search

=> s pyridin?
L5 2355547 PYRIDIN?

=> s l4 and l5
L6 19846 L4 AND L5

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	20.70	23.97

FILE 'HCAPLUS' ENTERED AT 01:18:16 ON 27 SEP 2007
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FILE LAST UPDATED: 26 Sep 2007 (20070926/ED)

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=> s l4/prep
TOO MANY TERMS FOR FILE CROSSOVER IN L4
There are limits on the size of an answer set being crossed over from one file to another. Enter HELP CROSSOVER at an arrow prompt (=>) for specific information.

=> s l4
TOO MANY TERMS FOR FILE CROSSOVER IN L4
There are limits on the size of an answer set being crossed over from one file to another. Enter HELP CROSSOVER at an arrow prompt (=>) for specific information.

=> s l4 and l5
TOO MANY TERMS FOR FILE CROSSOVER IN L4
There are limits on the size of an answer set being crossed over from one file to another. Enter HELP CROSSOVER at an arrow prompt (=>) for specific information.

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	5.20	29.17

FILE 'REGISTRY' ENTERED AT 01:19:20 ON 27 SEP 2007
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DICTIONARY FILE UPDATES: 25 SEP 2007 HIGHEST RN 948051-90-9

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<http://www.cas.org/support/stngen/stndoc/properties.html>

=> d his

(FILE 'HOME' ENTERED AT 01:10:45 ON 27 SEP 2007)

FILE 'REGISTRY' ENTERED AT 01:14:37 ON 27 SEP 2007

L1 STRUCTURE UPLOADED
L2 4 S L1

FILE 'REGISTRY' ENTERED AT 01:17:18 ON 27 SEP 2007
SET POSTINGS ON

L3 13671 S PYRIDINE AND ALDEHYDE
L4 323365 S ALDEHYDE?
L5 2355547 S PYRIDIN?
L6 19846 S L4 AND L5

FILE 'HCAPLUS' ENTERED AT 01:18:16 ON 27 SEP 2007

FILE 'REGISTRY' ENTERED AT 01:19:20 ON 27 SEP 2007

=> set postings on
SET COMMAND COMPLETED

=> s pyridine
956939 PYRIDINE
3 PYRIDINES
L7 956939 PYRIDINE
(PYRIDINE OR PYRIDINES)

=> s aldehyde?
L8 323365 ALDEHYDE?

=> s l7 and l8
L9 13671 L7 AND L8

=> file reg
COST IN U.S. DOLLARS
FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
10.80	39.97

Updated Search

FILE 'REGISTRY' ENTERED AT 01:20:20 ON 27 SEP 2007
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DICTIONARY FILE UPDATES: 25 SEP 2007 HIGHEST RN 948051-90-9

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REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=> d his

(FILE 'HOME' ENTERED AT 01:10:45 ON 27 SEP 2007)

FILE 'REGISTRY' ENTERED AT 01:14:37 ON 27 SEP 2007

L1 STRUCTURE UPLOADED
L2 4 S L1

FILE 'REGISTRY' ENTERED AT 01:17:18 ON 27 SEP 2007

SET POSTINGS ON ,
L3 13671 S PYRIDINE AND ALDEHYDE
L4 323365 S ALDEHYDE?
L5 2355547 S PYRIDIN?
L6 19846 S L4 AND L5

FILE 'HCAPLUS' ENTERED AT 01:18:16 ON 27 SEP 2007

FILE 'REGISTRY' ENTERED AT 01:19:20 ON 27 SEP 2007

SET POSTINGS ON
L7 956939 S PYRIDINE
L8 323365 S ALDEHYDE?
L9 13671 S L7 AND L8

FILE 'REGISTRY' ENTERED AT 01:20:20 ON 27 SEP 2007

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	2.25	42.22

FILE 'REGISTRY' ENTERED AT 01:23:02 ON 27 SEP 2007
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DICTIONARY FILE UPDATES: 25 SEP 2007 HIGHEST RN 948051-90-9

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REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=> s l3

956939 PYRIDINE
3 PYRIDINES
956939 PYRIDINE
(PYRIDINE OR PYRIDINES)
323365 ALDEHYDE
24 ALDEHYDES
323365 ALDEHYDE
(ALDEHYDE OR ALDEHYDES)

L10 13671 PYRIDINE AND ALDEHYDE

=> file hcaplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	10.35	52.57

FILE 'HCAPLUS' ENTERED AT 01:23:11 ON 27 SEP 2007
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FILE LAST UPDATED: 26 Sep 2007 (20070926/ED)

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=> d his

Updated Search

(FILE 'HOME' ENTERED AT 01:10:45 ON 27 SEP 2007)

FILE 'REGISTRY' ENTERED AT 01:14:37 ON 27 SEP 2007

L1 .STRUCTURE UPLOADED
L2 4 S L1

FILE 'REGISTRY' ENTERED AT 01:17:18 ON 27 SEP 2007

 SET POSTINGS ON
L3 13671 S PYRIDINE AND ALDEHYDE
L4 323365 S ALDEHYDE?
L5 2355547 S PYRIDIN?
L6 19846 S L4 AND L5

FILE 'HCAPLUS' ENTERED AT 01:18:16 ON 27 SEP 2007

FILE 'REGISTRY' ENTERED AT 01:19:20 ON 27 SEP 2007

 SET POSTINGS ON
L7 956939 S PYRIDINE
L8 323365 S ALDEHYDE?
L9 13671 S L7 AND L8

FILE 'REGISTRY' ENTERED AT 01:20:20 ON 27 SEP 2007

FILE 'REGISTRY' ENTERED AT 01:23:02 ON 27 SEP 2007
L10 13671 S L3

FILE 'HCAPLUS' ENTERED AT 01:23:11 ON 27 SEP 2007

=> s l3

L11 26335 L3

=> s l3/prep

 26335 L3
 4466967 PREP/RL
L12 6285 L3/PREP
 (L3 (L) PREP/RL)

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

ENTRY

TOTAL

SESSION

FULL ESTIMATED COST

2.60

55.17

FILE 'REGISTRY' ENTERED AT 01:23:39 ON 27 SEP 2007

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STRUCTURE FILE UPDATES: 25 SEP 2007 HIGHEST RN 948051-90-9

DICTIONARY FILE UPDATES: 25 SEP 2007 HIGHEST RN 948051-90-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Updated Search

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=> set postings on
SET COMMAND COMPLETED

=> s hydroxymethyl
L13 297990 HYDROXYMETHYL

=> s pyridin?
L14 2355547 PYRIDIN?
75% OF LIMIT FOR TOTAL ANSWERS REACHED

=> s pyridine
956939 PYRIDINE
3 PYRIDINES
L15 956939 PYRIDINE
(PYRIDINE OR PYRIDINES)
95% OF LIMIT FOR TOTAL ANSWERS REACHED

=> s l15 and l13
L16 6409 L15 AND L13

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	16.20	71.37

FILE 'HCAPLUS' ENTERED AT 01:25:17 ON 27 SEP 2007
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FILE COVERS 1907 - 27 Sep 2007 VOL 147 ISS 14
FILE LAST UPDATED: 26 Sep 2007 (20070926/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l16/rct
21483 L16
3018956 RCT/RL
L17 5405 L16/RCT
(L16 (L) RCT/RL)

Updated Search

=> d his

(FILE 'HOME' ENTERED AT 01:10:45 ON 27 SEP 2007)

FILE 'REGISTRY' ENTERED AT 01:14:37 ON 27 SEP 2007

L1 STRUCTURE UPLOADED
L2 4 S L1

FILE 'REGISTRY' ENTERED AT 01:17:18 ON 27 SEP 2007
SET POSTINGS ON

L3 13671 S PYRIDINE AND ALDEHYDE
L4 323365 S ALDEHYDE?
L5 2355547 S PYRIDIN?
L6 19846 S L4 AND L5

FILE 'HCAPLUS' ENTERED AT 01:18:16 ON 27 SEP 2007

FILE 'REGISTRY' ENTERED AT 01:19:20 ON 27 SEP 2007
SET POSTINGS ON

L7 956939 S PYRIDINE
L8 323365 S ALDEHYDE?
L9 13671 S L7 AND L8

FILE 'REGISTRY' ENTERED AT 01:20:20 ON 27 SEP 2007

FILE 'REGISTRY' ENTERED AT 01:23:02 ON 27 SEP 2007
L10 13671 S L3

FILE 'HCAPLUS' ENTERED AT 01:23:11 ON 27 SEP 2007

L11 26335 S L3
L12 6285 S L3/PREP

FILE 'REGISTRY' ENTERED AT 01:23:39 ON 27 SEP 2007
SET POSTINGS ON

L13 297990 S HYDROXYMETHYL
L14 2355547 S PYRIDIN?
L15 956939 S PYRIDINE
L16 6409 S L15 AND L13

FILE 'HCAPLUS' ENTERED AT 01:25:17 ON 27 SEP 2007

L17 5405 S L16/RCT

=> s l17 and l12

L18 874 L17 AND L12

=> s l18 and hypohalogenous? () salt

53 HYPOHALOGENOUS?
817819 SALT
626167 SALTS
1210218 SALT

(SALT OR SALTS)

1 HYPOHALOGENOUS? (W) SALT
L19 0 L18 AND HYPOHALOGENOUS? (W) SALT

=> s l18 and hypohalogen?

175 HYPOHALOGEN?
L20 1 L18 AND HYPOHALOGEN?

=> d l20, ibib abs hitstr, 1

Updated Search

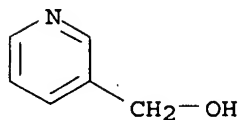
ACCESSION NUMBER: 2003:777759 HCAPLUS
 DOCUMENT NUMBER: 139:276804
 TITLE: Process for producing heterocyclic aldehyde
 INVENTOR(S): Shiomi, Yasuhiro; Uno, Osamu; Ohta, Akio; Sunakami, Takeshi
 PATENT ASSIGNEE(S): Koei Chemical Co., Ltd., Japan
 SOURCE: PCT Int. Appl., 48 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003080575	A1	20031002	WO 2003-JP3568	20030325
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2003221048	A1	20031008	AU 2003-221048	20030325
GB 2404190	A	20050126	GB 2004-21452	20030325
US 2005124807	A1	20050609	US 2003-509228	20030325
PRIORITY APPLN. INFO.:			JP 2002-86974	A 20020326
			WO 2003-JP3568	W 20030325

OTHER SOURCE(S): MARPAT 139:276804

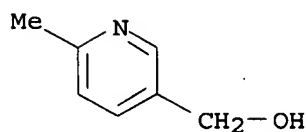
AB The patent relates to a process in which a heterocyclic alc. is oxidized to produce a heterocyclic aldehyde with high selectivity in high yield. The process comprises reacting a heterocyclic compound having per mol. at least one hydroxymethyl group bonded to a carbon atom of the heterocycle with a hypohalogenous acid salt in the presence of a base to oxidize the hydroxymethyl group to thereby produce the corresponding heterocyclic aldehyde, wherein the reaction is conducted in the presence of a 2,2,6,6-tetramethylpiperidin-1-oxyl derivative having per mol. two or more 2,2,6,6-tetramethylpiperidin-1-oxyl-4-yl groups. Thus, 3-pyridine-methanol was oxidized by sodium hypochlorite in presence of an oligomer derivative obtained from Chimassorb 944LD with hydrogen peroxide and generated 3-pyridinecarbaldehyde (90.1%) and nicotinic acid (3.4%).

IT 100-55-0, 3-Pyridine-methanol 34107-46-5,
 6-Methyl-3-pyridine-methanol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (in preparation of heterocyclic aldehyde)
 RN 100-55-0 HCAPLUS
 CN 3-Pyridinemethanol (CA INDEX NAME)

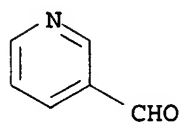


RN 34107-46-5 HCAPLUS

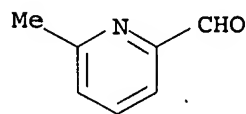
CN 3-Pyridinemethanol, 6-methyl- (CA INDEX NAME)



IT 500-22-1P, 3-Pyridinecarbaldehyde 1122-72-1P,
6-Methyl-2-pyridinecarbaldehyde
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of heterocyclic aldehyde)
RN 500-22-1 HCAPLUS
CN 3-Pyridinecarboxaldehyde (CA INDEX NAME)



RN 1122-72-1 HCAPLUS
CN 2-Pyridinecarboxaldehyde, 6-methyl- (CA INDEX NAME)



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> file caold
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
13.07	84.44

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-0.78	-0.78

CA SUBSCRIBER PRICE

FILE 'CAOLD' ENTERED AT 01:26:53 ON 27 SEP 2007
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FILE COVERS 1907-1966
FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE display formats.

Updated Search

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

=> d his

(FILE 'HOME' ENTERED AT 01:10:45 ON 27 SEP 2007)

FILE 'REGISTRY' ENTERED AT 01:14:37 ON 27 SEP 2007

L1 STRUCTURE UPLOADED
L2 4 S L1

FILE 'REGISTRY' ENTERED AT 01:17:18 ON 27 SEP 2007
SET POSTINGS ON

L3 13671 S PYRIDINE AND ALDEHYDE
L4 323365 S ALDEHYDE?
L5 2355547 S PYRIDIN?
L6 19846 S L4 AND L5

FILE 'HCAPLUS' ENTERED AT 01:18:16 ON 27 SEP 2007

FILE 'REGISTRY' ENTERED AT 01:19:20 ON 27 SEP 2007
SET POSTINGS ON

L7 956939 S PYRIDINE
L8 323365 S ALDEHYDE?
L9 13671 S L7 AND L8

FILE 'REGISTRY' ENTERED AT 01:20:20 ON 27 SEP 2007

FILE 'REGISTRY' ENTERED AT 01:23:02 ON 27 SEP 2007
L10 13671 S L3

FILE 'HCAPLUS' ENTERED AT 01:23:11 ON 27 SEP 2007

L11 26335 S L3
L12 6285 S L3/PREP

FILE 'REGISTRY' ENTERED AT 01:23:39 ON 27 SEP 2007.
SET POSTINGS ON

L13 297990 S HYDROXYMETHYL
L14 2355547 S PYRIDIN?
L15 956939 S PYRIDINE
L16 6409 S L15 AND L13

FILE 'HCAPLUS' ENTERED AT 01:25:17 ON 27 SEP 2007

L17 5405 S L16/RCT
L18 874 S L17 AND L12
L19 0 S L18 AND HYPOHALOGENOUS? () SALT
L20 1 S L18 AND HYPOHALOGEN?

FILE 'CAOLD' ENTERED AT 01:26:53 ON 27 SEP 2007

=> s l16 and l3

408 L16
741 L3
L21 78 L16 AND L3

=> s l21 and hypohalogenous? () salt?
2 HYPOHALOGENOUS?

Updated Search

45526 SALT?

0 HYPOHALOGENOUS? (W) SALT?

L22 0 L21 AND HYPOHALOGENOUS? (W) SALT?

=> file.reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

6.09

90.53

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

0.00

-0.78

FILE 'REGISTRY' ENTERED AT 01:29:38 ON 27 SEP 2007

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STRUCTURE FILE UPDATES: 25 SEP 2007 HIGHEST RN 948051-90-9

DICTIONARY FILE UPDATES: 25 SEP 2007 HIGHEST RN 948051-90-9

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<http://www.cas.org/support/stngen/stndoc/properties.html>

=>

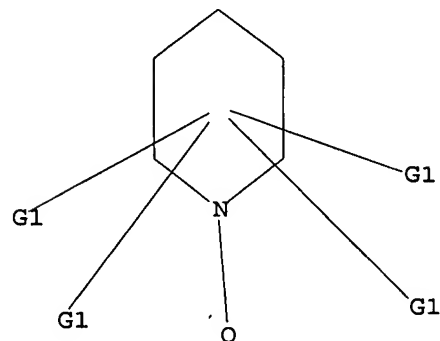
Uploading C:\Documents and Settings\brobinson1\My Documents\stnweb\Queries\asdfnjghut.str

L23 STRUCTURE UPLOADED

=> d 123

L23 HAS NO ANSWERS

L23 STR



G1 Me,Et

Updated Search

Structure attributes must be viewed using STN Express query preparation.

=> s l23

SAMPLE SEARCH INITIATED 01:32:17 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 3702 TO ITERATE

54.0% PROCESSED 2000 ITERATIONS 50 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 70391 TO 77689
PROJECTED ANSWERS: 7723 TO 10267

L24 50 SEA SSS SAM L23

=> s l23 full

THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 171.65 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y
FULL SEARCH INITIATED 01:32:21 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 74284 TO ITERATE

100.0% PROCESSED 74284 ITERATIONS 8671 ANSWERS
SEARCH TIME: 00.00.01

L25 8671 SEA SSS FUL L23

=> d his

(FILE 'HOME' ENTERED AT 01:10:45 ON 27 SEP 2007)

FILE 'REGISTRY' ENTERED AT 01:14:37 ON 27 SEP 2007

L1 STRUCTURE UPLOADED
L2 4 S L1

FILE 'REGISTRY' ENTERED AT 01:17:18 ON 27 SEP 2007

SET POSTINGS ON
L3 13671 S PYRIDINE AND ALDEHYDE
L4 323365 S ALDEHYDE?
L5 2355547 S PYRIDIN?
L6 19846 S L4 AND L5

FILE 'HCAPLUS' ENTERED AT 01:18:16 ON 27 SEP 2007

FILE 'REGISTRY' ENTERED AT 01:19:20 ON 27 SEP 2007

SET POSTINGS ON
L7 956939 S PYRIDINE
L8 323365 S ALDEHYDE?
L9 13671 S L7 AND L8

FILE 'REGISTRY' ENTERED AT 01:20:20 ON 27 SEP 2007

FILE 'REGISTRY' ENTERED AT 01:23:02 ON 27 SEP 2007
L10 13671 S L3

FILE 'HCAPLUS' ENTERED AT 01:23:11 ON 27 SEP 2007

L11 26335 S L3
L12 6285 S L3/PREP

Updated Search

FILE 'REGISTRY' ENTERED AT 01:23:39 ON 27 SEP 2007
SET POSTINGS ON

L13 297990 S HYDROXYMETHYL
L14 2355547 S PYRIDIN?
L15 956939 S PYRIDINE
L16 6409 S L15 AND L13

FILE 'HCAPLUS' ENTERED AT 01:25:17 ON 27 SEP 2007

L17 5405 S L16/RCT
L18 874 S L17 AND L12
L19 0 S L18 AND HYPOHALOGENOUS? () SALT
L20 1 S L18 AND HYPOHALOGEN?

FILE 'CAOLD' ENTERED AT 01:26:53 ON 27 SEP 2007

L21 78 S L16 AND L3
L22 0 S L21 AND HYPOHALOGENOUS? () SALT?

FILE 'REGISTRY' ENTERED AT 01:29:38 ON 27 SEP 2007

L23 STRUCTURE UPLOADED
L24 50 S L23
L25 8671 S L23 FULL

=> file hcaplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	173.90	264.43
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-0.78

FILE 'HCAPLUS' ENTERED AT 01:32:26 ON 27 SEP 2007
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FILE LAST UPDATED: 26 Sep 2007 (20070926/ED)

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=> d his

(FILE 'HOME' ENTERED AT 01:10:45 ON 27 SEP 2007)

FILE 'REGISTRY' ENTERED AT 01:14:37 ON 27 SEP 2007

Updated Search

L1 STRUCTURE UPLOADED
L2 4 S L1

FILE 'REGISTRY' ENTERED AT 01:17:18 ON 27 SEP 2007
SET POSTINGS ON

L3 13671 S PYRIDINE AND ALDEHYDE
L4 323365 S ALDEHYDE?
L5 2355547 S PYRIDIN?
L6 19846 S L4 AND L5

FILE 'HCAPLUS' ENTERED AT 01:18:16 ON 27 SEP 2007

FILE 'REGISTRY' ENTERED AT 01:19:20 ON 27 SEP 2007
SET POSTINGS ON

L7 956939 S PYRIDINE
L8 323365 S ALDEHYDE?
L9 13671 S L7 AND L8

FILE 'REGISTRY' ENTERED AT 01:20:20 ON 27 SEP 2007

FILE 'REGISTRY' ENTERED AT 01:23:02 ON 27 SEP 2007
L10 13671 S L3

FILE 'HCAPLUS' ENTERED AT 01:23:11 ON 27 SEP 2007
L11 26335 S L3
L12 6285 S L3/PREP

FILE 'REGISTRY' ENTERED AT 01:23:39 ON 27 SEP 2007
SET POSTINGS ON

L13 297990 S HYDROXYMETHYL
L14 2355547 S PYRIDIN?
L15 956939 S PYRIDINE
L16 6409 S L15 AND L13

FILE 'HCAPLUS' ENTERED AT 01:25:17 ON 27 SEP 2007

L17 5405 S L16/RCT
L18 874 S L17 AND L12
L19 0 S L18 AND HYPOHALOGENOUS? () SALT
L20 1 S L18 AND HYPOHALOGEN?

FILE 'CAOLD' ENTERED AT 01:26:53 ON 27 SEP 2007

L21 78 S L16 AND L3
L22 0 S L21 AND HYPOHALOGENOUS? () SALT?

FILE 'REGISTRY' ENTERED AT 01:29:38 ON 27 SEP 2007

L23 STRUCTURE UPLOADED
L24 50 S L23
L25 8671 S L23 FULL

FILE 'HCAPLUS' ENTERED AT 01:32:26 ON 27 SEP 2007

=> s 125
L26 9992 L25

=> s 126 and 118
L27 20 L26 AND L18

=> file reg
COST IN U.S. DOLLARS
FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
5.20	269.63

Updated Search

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-0.78

FILE 'REGISTRY' ENTERED AT 01:33:21 ON 27 SEP 2007
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STRUCTURE FILE UPDATES: 25 SEP 2007 HIGHEST RN 948051-90-9
 DICTIONARY FILE UPDATES: 25 SEP 2007 HIGHEST RN 948051-90-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

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<http://www.cas.org/support/stngen/stndoc/properties.html>

=> set postings on
 SET COMMAND COMPLETED

=> s hypohalogenous salt
 0 HYPOHALOGENOUS
 742306 SALT
 4820 SALTS
 746802 SALT
 (SALT OR SALTS)
 L28 0 HYPOHALOGENOUS SALT
 (HYPOHALOGENOUS (W) SALT)

=> s hypohalogen?
 L29 0 HYPOHALOGEN?

=> s halogenous salt
 0 HALOGENOUS
 742306 SALT
 4820 SALTS
 746802 SALT
 (SALT OR SALTS)
 L30 0 HALOGENOUS SALT
 (HALOGENOUS (W) SALT)

=> s salt
 742306 SALT
 4820 SALTS

SYSTEM LIMITS EXCEEDED - SEARCH ENDED

The search profile you entered was too complex or gave too many answers. Simplify or subdivide the query and try again. If you have exceeded the answer limit, enter DELETE HISTORY at an arrow prompt

Updated Search

(=>) to remove all previous answers sets and begin at L1. Use the SAVE command to store any important profiles or answer sets before using DELETE HISTORY.

```
=> s halogenous s
      0 HALOGENOUS
      2508332 S
L31    0 HALOGENOUS S
      (HALOGENOUS (W) S)
```

```
=> s halogenous
      0 HALOGENOUS
L32    0 HALOGENOUS
```

```
=> s halogen?
L33    142 HALOGEN?
```

```
=> s l33 and salt
      742306 SALT
      4820 SALTS
      746802 SALT
      (SALT OR SALTS)
L34    0 L33 AND SALT
```

```
=> d his
```

(FILE 'HOME' ENTERED AT 01:10:45 ON 27 SEP 2007)

```
FILE 'REGISTRY' ENTERED AT 01:14:37 ON 27 SEP 2007
L1      STRUCTURE UPLOADED
L2      4 S L1
```

```
FILE 'REGISTRY' ENTERED AT 01:17:18 ON 27 SEP 2007
      SET POSTINGS ON
L3      13671 S PYRIDINE AND ALDEHYDE
L4      323365 S ALDEHYDE?
L5      2355547 S PYRIDIN?
L6      19846 S L4 AND L5
```

FILE 'HCAPLUS' ENTERED AT 01:18:16 ON 27 SEP 2007

```
FILE 'REGISTRY' ENTERED AT 01:19:20 ON 27 SEP 2007
      SET POSTINGS ON
L7      956939 S PYRIDINE
L8      323365 S ALDEHYDE?
L9      13671 S L7 AND L8
```

FILE 'REGISTRY' ENTERED AT 01:20:20 ON 27 SEP 2007

```
FILE 'REGISTRY' ENTERED AT 01:23:02 ON 27 SEP 2007
L10     13671 S L3
```

```
FILE 'HCAPLUS' ENTERED AT 01:23:11 ON 27 SEP 2007
L11     26335 S L3
L12     6285 S L3/PREP
```

```
FILE 'REGISTRY' ENTERED AT 01:23:39 ON 27 SEP 2007
      SET POSTINGS ON
L13     297990 S HYDROXYMETHYL
L14     2355547 S PYRIDIN?
L15     956939 S PYRIDINE
```

Updated Search

L16 6409 S L15 AND L13

FILE 'HCAPLUS' ENTERED AT 01:25:17 ON 27 SEP 2007

L17 5405 S L16/RCT

L18 874 S L17 AND L12

L19 0 S L18 AND HYPOHALOGENOUS? () SALT

L20 1 S L18 AND HYPOHALOGEN?

FILE 'CAOLD' ENTERED AT 01:26:53 ON 27 SEP 2007

L21 78 S L16 AND L3

L22 0 S L21 AND HYPOHALOGENOUS? () SALT?

FILE 'REGISTRY' ENTERED AT 01:29:38 ON 27 SEP 2007

L23 STRUCTURE UPLOADED

L24 50 S L23

L25 8671 S L23 FULL

FILE 'HCAPLUS' ENTERED AT 01:32:26 ON 27 SEP 2007

L26 9992 S L25

L27 20 S L26 AND L18

FILE 'REGISTRY' ENTERED AT 01:33:21 ON 27 SEP 2007

SET POSTINGS ON

L28 0 S HYPOHALOGENOUS SALT

L29 0 S HYPOHALOGEN?

L30 0 S HALOGENOUS SALT

L31 0 S HALOGENOUS S

L32 0 S HALOGENOUS

L33 142 S HALOGEN?

L34 0 S L33 AND SALT

=> d l27,ibib abs hitstr, 1-20

YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:n

=> file hcaplus

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SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

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320.48

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

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FILE COVERS 1907 - 27 Sep 2007 VOL 147 ISS 14

Updated Search

FILE LAST UPDATED: 26 Sep 2007 (20070926/ED)

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=> d his

(FILE 'HOME' ENTERED AT 01:10:45 ON 27 SEP 2007)

FILE 'REGISTRY' ENTERED AT 01:14:37 ON 27 SEP 2007

L1 STRUCTURE UPLOADED
L2 4 S L1

FILE 'REGISTRY' ENTERED AT 01:17:18 ON 27 SEP 2007
SET POSTINGS ON

L3 13671 S PYRIDINE AND ALDEHYDE
L4 323365 S ALDEHYDE?
L5 2355547 S PYRIDIN?
L6 19846 S L4 AND L5

FILE 'HCAPLUS' ENTERED AT 01:18:16 ON 27 SEP 2007

FILE 'REGISTRY' ENTERED AT 01:19:20 ON 27 SEP 2007
SET POSTINGS ON

L7 956939 S PYRIDINE
L8 323365 S ALDEHYDE?
L9 13671 S L7 AND L8

FILE 'REGISTRY' ENTERED AT 01:20:20 ON 27 SEP 2007

FILE 'REGISTRY' ENTERED AT 01:23:02 ON 27 SEP 2007
L10 13671 S L3

FILE 'HCAPLUS' ENTERED AT 01:23:11 ON 27 SEP 2007

L11 26335 S L3
L12 6285 S L3/PREP

FILE 'REGISTRY' ENTERED AT 01:23:39 ON 27 SEP 2007
SET POSTINGS ON

L13 297990 S HYDROXYMETHYL
L14 2355547 S PYRIDIN?
L15 956939 S PYRIDINE
L16 6409 S L15 AND L13

FILE 'HCAPLUS' ENTERED AT 01:25:17 ON 27 SEP 2007

L17 5405 S L16/RCT
L18 874 S L17 AND L12
L19 0 S L18 AND HYPOHALOGENOUS? () SALT
L20 1 S L18 AND HYPOHALOGEN?

FILE 'CAOLD' ENTERED AT 01:26:53 ON 27 SEP 2007

L21 78 S L16 AND L3
L22 0 S L21 AND HYPOHALOGENOUS? () SALT?

FILE 'REGISTRY' ENTERED AT 01:29:38 ON 27 SEP 2007

L23 STRUCTURE UPLOADED
L24 50 S L23
L25 8671 S L23 FULL

Updated Search

FILE 'HCAPLUS' ENTERED AT 01:32:26 ON 27 SEP 2007

L26 9992 S L25
L27 20 S L26 AND L18

FILE 'REGISTRY' ENTERED AT 01:33:21 ON 27 SEP 2007

SET POSTINGS ON
L28 0 S HYPOHALOGENOUS SALT
L29 0 S HYPOHALOGEN?
L30 0 S HALOGENOUS SALT
L31 0 S HALOGENOUS S
L32 0 S HALOGENOUS
L33 142 S HALOGEN?
L34 0 S L33 AND SALT

FILE 'HCAPLUS' ENTERED AT 01:34:57 ON 27 SEP 2007

=> d l27, ibib abs hitstr, 1-20

L27 ANSWER 1 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2007:440534 HCAPLUS

DOCUMENT NUMBER: 147:72448

TITLE: Efficient NO equivalent for activation of molecular oxygen and its applications in transition-metal-free catalytic aerobic alcohol oxidation

AUTHOR(S): Xie, Yi; Mo, Weimin; Xu, Dong; Shen, Zhenlu; Sun, Nan; Hu, Baoxiang; Hu, Xinquan

CORPORATE SOURCE: College of Chemical Engineering and Material Sciences, Zhejiang University of Technology, Hangzhou, 310014, Peop. Rep. China

SOURCE: Journal of Organic Chemistry (2007), 72(11), 4288-4291
CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 147:72448

AB Tert-Bu nitrite (TBN) was identified as an efficient NO equivalent for the activation of mol. oxygen. The unique property of TBN enabled TEMPO-catalyzed aerobic alc. oxidation to be performed in high-volume efficiency. Up to a 16,000 turnover number was achieved in this transition-metal-free aerobic catalytic system. Under the optimal reaction conditions, various alcs. were converted into their corresponding carbonyl compds. with TEMPO/HBr/TBN as catalyst. The newly developed method was suitable for the oxidation of solid substrate alcs. with high m.p. and/or low solubility under the help of min. solvent to form a slurry.

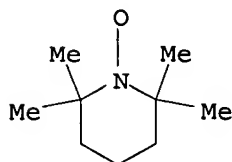
IT 2564-83-2, TEMPO

RL: CAT (Catalyst use); USES (Uses)

(tert-Bu nitrite as nitric oxide equivalent in aerobic alc. oxidation using tetramethylpiperidyl-oxy-hydrogen bromide-tert-Bu nitrite catalyst system)

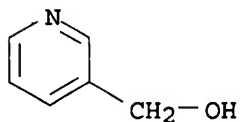
RN 2564-83-2 HCAPLUS

CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)

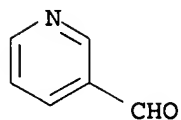


Updated Search

IT 100-55-0, 3-Pyridinemethanol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (tert-Bu nitrite as nitric oxide equivalent in aerobic alc. oxidation using
 tetramethylpiperidyl-oxy-hydrogen bromide-tert-Bu nitrite catalyst
 system)
 RN 100-55-0 HCAPLUS
 CN 3-Pyridinemethanol (CA INDEX NAME)



IT 500-22-1P, 3-Pyridinecarboxaldehyde
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (tert-Bu nitrite as nitric oxide equivalent in aerobic alc. oxidation using
 tetramethylpiperidyl-oxy-hydrogen bromide-tert-Bu nitrite catalyst
 system)
 RN 500-22-1 HCAPLUS
 CN 3-Pyridinecarboxaldehyde (CA INDEX NAME)



REFERENCE COUNT: 68 THERE ARE 68 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 2 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:1187826 HCAPLUS

DOCUMENT NUMBER: 146:121623

TITLE: Multipolymer reaction system for selective aerobic
 alcohol oxidation: simultaneous use of multiple
 different polymer-supported ligands

AUTHOR(S): Chung, Cecilia Wan Ying; Toy, Patrick H.

CORPORATE SOURCE: Department of Chemistry, The University of Hong Kong,
 Hong Kong, Peop. Rep. China

SOURCE: Journal of Combinatorial Chemistry (2007), 9(1),
 115-120

CODEN: JCCHFF; ISSN: 1520-4766

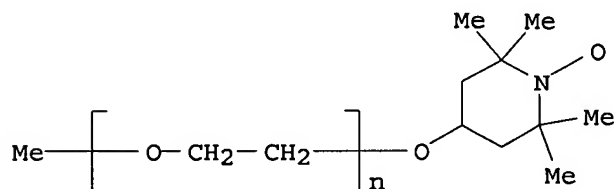
PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

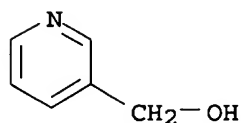
LANGUAGE: English

AB A multipolymer reaction system has been developed in which a water-soluble
 polymer-supported 2,2'-bipyridine group and a similarly immobilized TEMPO
 derivative are used as ligands for copper to effect the mild and selective
 aerobic oxidation of primary alcs. in acetonitrile-water solvent. In this
 reaction system, poly(ethylene glycol) monomethyl ether (mol. weight = 5000
 Da) was used as the support for both the 2,2'-bipyridine and TEMPO
 moieties because of its solubility properties. The use of these functionalized
 polymers simultaneously in catalytic quantities allows for primary alcs.
 to be oxidized selectively to the corresponding aldehydes in an
 environmentally friendly manner. This is the first reported example of
 using two different polymer-supported ligands together to form an
 organometallic species capable of catalyzing an organic reaction.

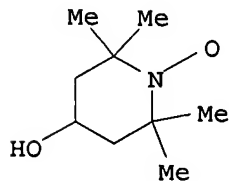
IT 848328-35-8P, 4-Hydroxy-TEMPO
 RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);
 USES (Uses)
 (aerobic oxidation of alcs. to aldehydes using copper-polymer-supported
 bipyridine and polymer-supported TEMPO catalyst)
 RN 848328-35-8 HCAPLUS
 CN Poly(oxy-1,2-ethanediyl), α -methyl- ω -[(2,2,6,6-tetramethyl-1-
 oxy-4-piperidinyloxy]- (9CI) (CA INDEX NAME)



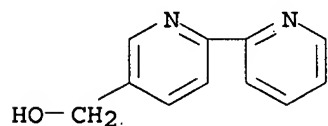
IT 100-55-0, 3-Pyridinemethanol 2226-96-2, 4-Hydroxy-TEMPO
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (aerobic oxidation of alcs. to aldehydes using copper-polymer-supported
 bipyridine and polymer-supported TEMPO catalyst)
 RN 100-55-0 HCAPLUS
 CN 3-Pyridinemethanol (CA INDEX NAME)



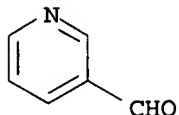
RN 2226-96-2 HCAPLUS
 CN 1-Piperidinyloxy, 4-hydroxy-2,2,6,6-tetramethyl- (CA INDEX NAME)



IT 146581-87-5P, 2,2'-Bipyridine-5-methanol
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
 (Preparation); RACT (Reactant or reagent)
 (aerobic oxidation of alcs. to aldehydes using copper-polymer-supported
 bipyridine and polymer-supported TEMPO catalyst)
 RN 146581-87-5 HCAPLUS
 CN [2,2'-Bipyridine]-5-methanol (9CI) (CA INDEX NAME)



IT 500-22-1P, Nicotinaldehyde
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (aerobic oxidation of alcs. to aldehydes using copper-polymer-supported
 bipyridine and polymer-supported TEMPO catalyst)
 RN 500-22-1 HCAPLUS
 CN 3-Pyridinecarboxaldehyde (CA INDEX NAME)

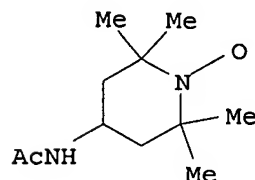


REFERENCE COUNT: 93 THERE ARE 93 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

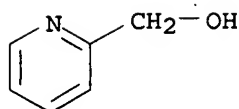
L27 ANSWER 3 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2006:761970 HCAPLUS
 DOCUMENT NUMBER: 145:356134
 TITLE: Cu(II)-Catalyzed Selective Aerobic Oxidation of
 Alcohols under Mild Conditions
 AUTHOR(S): Jiang, Nan; Ragauskas, Arthur J.
 CORPORATE SOURCE: Department of Chemistry, Georgia Institute of
 Technology, Atlanta, GA, 30332, USA
 SOURCE: Journal of Organic Chemistry (2006), 71(18), 7087-7090
 CODEN: JOCEAH; ISSN: 0022-3263
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 145:356134

AB An efficient four-component system consisting of acetamido-
 TEMPO/Cu(ClO₄)₂/TMDP/DABCO in DMSO has been developed for room-temperature
 aerobic alc. oxidation Under the optimal conditions, various alcs. could be
 converted into their corresponding aldehydes or ketones in good to
 excellent yields. The newly developed catalytic system could also be
 recycled and reused for three runs without any significant loss of
 catalytic activity.

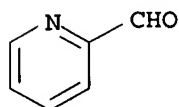
IT 14691-89-5, 4-Acetamido-TEMPO
 RL: CAT (Catalyst use); USES (Uses)
 (preparation of aldehydes or ketones by aerobic alc. oxidation catalyzed by
 acetamido-TEMPO/Cu(ClO₄)₂/TMDP/DABCO in DMSO)
 RN 14691-89-5 HCAPLUS
 CN 1-Piperidinyloxy, 4-(acetylamino)-2,2,6,6-tetramethyl- (CA INDEX NAME)



IT 586-98-1, 2-Pyridinemethanol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of aldehydes or ketones by aerobic alc. oxidation catalyzed by
 acetamido-TEMPO/Cu(ClO₄)₂/TMDP/DABCO in DMSO)
 RN 586-98-1 HCAPLUS
 CN 2-Pyridinemethanol (CA INDEX NAME)



IT 1121-60-4P, 2-Formylpyridine
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of aldehydes or ketones by aerobic alc. oxidation catalyzed by
 acetamido-TEMPO/Cu(ClO4)2/TMDP/DABCO in DMSO)
 RN 1121-60-4 HCAPLUS
 CN 2-Pyridinecarboxaldehyde (CA INDEX NAME)



REFERENCE COUNT: 80 THERE ARE 80 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 4 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2006:669406 HCAPLUS
 DOCUMENT NUMBER: 145:166657
 TITLE: Process for preparation of aldehydes and ketones from
 alcohols by oxidation with air
 INVENTOR(S): Liu, Renhua; Hu, Xinquan; Dong, Chunyan; Liang,
 Xinmiao
 PATENT ASSIGNEE(S): Dalian Institute of Chemical Physics, Chinese Academy
 of Sciences, Peop. Rep. China
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 9 pp.
 CODEN: CNXXEV
 DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

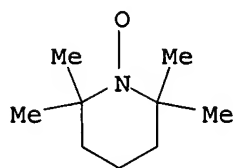
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1796349	A	20060705	CN 2004-10101893	20041230
PRIORITY APPLN. INFO.:			CN 2004-10101893	20041230
OTHER SOURCE(S): CASREACT 145:166657				

AB The method comprises oxidizing alc. with air in the presence of 0.2 mol%
 TEMPO free radical or its derivative, 4-10 mol% active bromine
 (1,3-dibromo-5,5-dimethylhydantoin, N-bromosuccinimide, or pyridinium
 tribromide) and 4-10 mol% nitrite (sodium nitrite or potassium nitrite) in
 1-5 mL water and 100 mL dichloromethane at 100°C and 0.4-0.9 Mpa
 for 1-10 h. The alc. can be benzyl alc., 4-methylbenzyl alc.,
 3-methylbenzyl alc., 2-methylbenzyl alc., 4-chlorobenzyl alc.,
 3-chlorobenzyl alc., 2-chlorobenzyl alc., α-methylbenzyl alc.,
 3-pyridinemethanol, 2-thiophenemethanol, cyclohexanol, octanol, or
 menthol.

IT 2564-83-2, 2,2,6,6-Tetramethylpiperidine N-oxyl 14691-89-5
 54052-87-8
 RL: CAT (Catalyst use); USES (Uses)
 (preparation of aldehydes and ketones from alcs. by oxidation with air)
 RN 2564-83-2 HCAPLUS

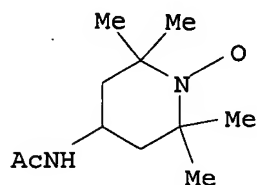
Updated Search

CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



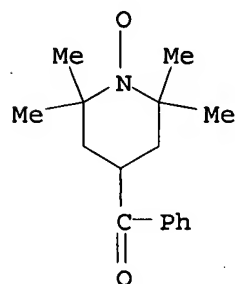
RN 14691-89-5 HCAPLUS

CN 1-Piperidinyloxy, 4-(acetylamino)-2,2,6,6-tetramethyl- (CA INDEX NAME)



RN 54052-87-8 HCAPLUS

CN 1-Piperidinyloxy, 4-benzoyl-2,2,6,6-tetramethyl- (9CI) (CA INDEX NAME)



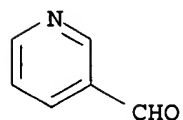
IT 500-22-1P, 3-Pyridylaldehyde

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(preparation of aldehydes and ketones from alcs. by oxidation with air)

RN 500-22-1 HCAPLUS

CN 3-Pyridinecarboxaldehyde (CA INDEX NAME)



IT 100-55-0, 3-Pyridinemethanol

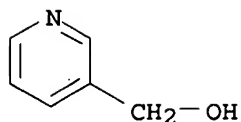
RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of aldehydes and ketones from alcs. by oxidation with air)

RN 100-55-0 HCAPLUS

CN 3-Pyridinemethanol (CA INDEX NAME)

Updated Search



L27 ANSWER 5 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:624725 HCAPLUS

DOCUMENT NUMBER: 145:124320

TITLE: Process for preparation of aromatic aldehydes and ketones by catalytic oxidation in aqueous solution

INVENTOR(S): Hu, Xinqun; Liu, Renhua; Dong, Chunyan; Liang, Xinmiao

PATENT ASSIGNEE(S): Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Peop. Rep. China

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 10 pp. CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

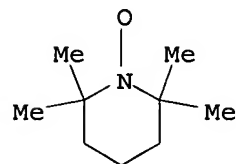
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1789225	A	20060621	CN 2004-10098936	20041216
PRIORITY APPLN. INFO.:			CN 2004-10098936	20041216
OTHER SOURCE(S): CASREACT 145:124320				

AB The invention pertains to a method for catalytically oxidizing arylmethanol to aryl aldehyde or ketone by air at 40-120 °C for 1.5-16 h at 0.1-1.2 MPa, in which 2,2,6,6-tetramethylpiperidiny-1-oxy (TEMPO) or its derivs., nitrites e.g. sodium nitrite or potassium nitrite, and active bromide to produce hypobromous acid in situ e.g. 1,3-dibromo-5,5-dimethyl-hydantoin, N-bromosuccinimide, pyridinium tribromide etc. at a molar ratio of 1:2-4:4 are used as catalysts. The molar ratio of TEMPO or its derivative and arylmethanol is about 1:100.

IT 2564-83-2, 2,2,6,6-Tetramethylpiperidiny-1-oxy 14691-89-5
 , 4-(Acetylamino)-2,2,6,6-tetramethylpiperidiny-1-oxy 54052-87-8
 , 4-Benzoyl-2,2,6,6-tetramethylpiperidiny-1-oxy
 RL: CAT (Catalyst use); USES (Uses)
 (preparation of aromatic aldehydes and ketones by catalytic oxidation in aqueous solution)

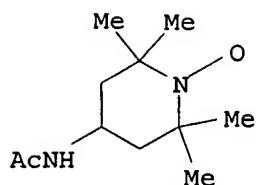
RN 2564-83-2 HCAPLUS

CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



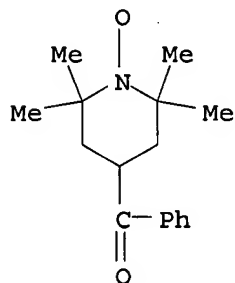
RN 14691-89-5 HCAPLUS

CN 1-Piperidinyloxy, 4-(acetylamino)-2,2,6,6-tetramethyl- (CA INDEX NAME)



RN 54052-87-8 HCAPLUS

CN 1-Piperidinyloxy, 4-benzoyl-2,2,6,6-tetramethyl- (9CI) (CA INDEX NAME)



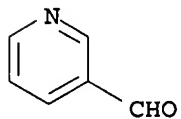
IT 500-22-1P, 3-Pyridylaldehyde

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(preparation of aromatic aldehydes and ketones by catalytic oxidation in aqueous solution)

RN 500-22-1 HCAPLUS

CN 3-Pyridinecarboxaldehyde (CA INDEX NAME)



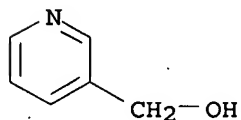
IT 100-55-0, 3-Pyridylmethanol

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of aromatic aldehydes and ketones by catalytic oxidation in aqueous solution)

RN 100-55-0 HCAPLUS

CN 3-Pyridinemethanol (CA INDEX NAME)



L27 ANSWER 6 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:284083 HCAPLUS

DOCUMENT NUMBER: 145:7498

Updated Search

TITLE: Catalyst system and method for preparation of aldehyde and ketone from alcohol
 INVENTOR(S): Liu, Renhua; Hu, Xinquan; Dong, Chunyan; Liang, Xinmiao
 PATENT ASSIGNEE(S): Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Peop. Rep. China
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 12 pp.
 CODEN: CNXXEV
 DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

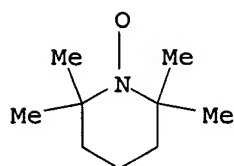
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1651381	A	20050810	CN 2004-10003791	20040205

PRIORITY APPLN. INFO.:
 OTHER SOURCE(S): CASREACT 145:7498

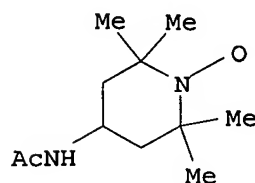
AB This invention pertains to catalyst system for preparing aldehyde and ketone from alc., and the catalyst system comprises oxidizing agent and catalyst of 2,2,6,6-tetramethyl-1-piperidinyloxy, halogen, and nitrite. The 2,2,6,6-tetra-Me piperidine-oxo free radical is 4-benzoyl-2,2,6,6-tetramethylpiperidinyloxy, or 4-acetylamino-2,2,6,6-tetramethylpiperidinyloxy. The method for preparing aldehyde and ketone from alc. comprises mixing alc. and catalyst system and reacting at 40-120°C and 0.1-1.0MPa for 0.5-8 h. The alc. is primary alc. of substituted benzyl alc., fatty primary alc. and/or N, S heteroaryl substituted methanol; secondary alc. of aryl substituted secondary alc., fatty secondary alc. or/and alicyclic alc.

IT 2564-83-2, Tempo 14691-89-5 54052-87-8
 RL: CAT (Catalyst use); USES (Uses)
 (preparation of aldehyde and ketone by oxidation of alc. in presence of TEMPO, nitrite, and halogen)

RN 2564-83-2 HCAPLUS
 CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)

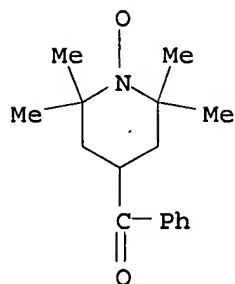


RN 14691-89-5 HCAPLUS
 CN 1-Piperidinyloxy, 4-(acetylamino)-2,2,6,6-tetramethyl- (CA INDEX NAME)

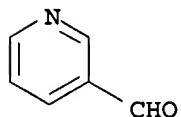


RN 54052-87-8 HCAPLUS
 CN 1-Piperidinyloxy, 4-benzoyl-2,2,6,6-tetramethyl- (9CI) (CA INDEX NAME)

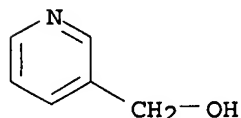
Updated Search



IT 500-22-1P, 3-Pyridinecarboxaldehyde
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP
 (Preparation)
 (preparation of aldehyde and ketone by oxidation of alc. in presence of
 TEMPO,
 nitrite, and halogen)
 RN 500-22-1 HCAPLUS
 CN 3-Pyridinecarboxaldehyde (CA INDEX NAME)



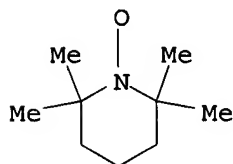
IT 100-55-0, 3-Pyridinemethanol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of aldehyde and ketone by oxidation of alc. in presence of
 TEMPO,
 nitrite, and halogen)
 RN 100-55-0 HCAPLUS
 CN 3-Pyridinemethanol (CA INDEX NAME)



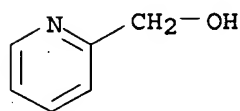
L27 ANSWER 7 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2005:1148403 HCAPLUS
 DOCUMENT NUMBER: 144:51217
 TITLE: NaNO2-activated, iron-TEMPO catalyst system for
 aerobic alcohol oxidation under mild conditions
 AUTHOR(S): Wang, Naiwei; Liu, Renhua; Chen, Jiping; Liang,
 Xinmiao
 CORPORATE SOURCE: Dalian Institute of Chemical Physics, Chinese Academy
 of Sciences, Dalian, 116023, Peop. Rep. China
 SOURCE: Chemical Communications (Cambridge, United Kingdom)
 (2005), (42), 5322-5324
 CODEN: CHCOFS; ISSN: 1359-7345
 PUBLISHER: Royal Society of Chemistry
 DOCUMENT TYPE: Journal

Updated Search

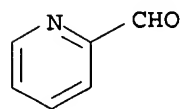
LANGUAGE: English
 OTHER SOURCE(S): CASREACT 144:51217
 AB FeCl3-TEMPO-NaNO2 catalyzes the selective and mild aerobic oxidation of a broad range of alcs. to the corresponding aldehydes and ketones.
 IT 2564-83-2, Tempo
 RL: CAT (Catalyst use); USES (Uses)
 (preparation of aldehydes and ketones via FeCl3-TEMPO-NaNO2 catalyzed selective aerobic oxidation of alcs.)
 RN 2564-83-2 HCAPLUS
 CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



IT 586-98-1, 2-Hydroxymethylpyridine
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of aldehydes and ketones via FeCl3-TEMPO-NaNO2 catalyzed selective aerobic oxidation of alcs.)
 RN 586-98-1 HCAPLUS
 CN 2-Pyridinemethanol (CA INDEX NAME)



IT 1121-60-4P, 2-Pyridinecarboxaldehyde
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of aldehydes and ketones via FeCl3-TEMPO-NaNO2 catalyzed selective aerobic oxidation of alcs.)
 RN 1121-60-4 HCAPLUS
 CN 2-Pyridinecarboxaldehyde (CA INDEX NAME)



REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 8 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:1148813 HCAPLUS

DOCUMENT NUMBER: 142:74314

TITLE: Highly Efficient Catalytic Aerobic Oxidations of Benzylic Alcohols in Water

AUTHOR(S): Liu, Renhua; Dong, Chunyan; Liang, Xinmiao; Wang, Xiujuan; Hu, Xinquan

CORPORATE SOURCE: Dalian Institute of Chemical Physics, the Chinese Academy of Sciences, Dalian, 116023, Peop. Rep. China

SOURCE: Journal of Organic Chemistry (2005), 70(2), 729-731

Updated Search

PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 142:74314

AB A highly efficient catalytic system without transition metals in water has been developed for aerobic oxidns. of benzylic alcs. The newly developed catalyst system oxidized benzylic alcs. and heteroarom. analogs with 1 mol % TEMPO as a catalyst and with a catalytic amount of 1,3-dibromo-5,5-dimethylhydantoin and NaNO₂ as cocatalysts. Under the optimal conditions, various alcs. were converted into their corresponding aldehydes or ketones in high yields.

IT 2564-83-2, TEMPO

RL: CAT (Catalyst use); USES (Uses)

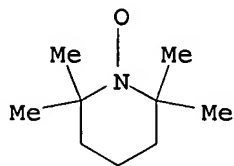
(preparation of carbonyl compound via catalytic aerobic oxidation of alcs.

with

TEMPO in water)

RN 2564-83-2 HCAPLUS

CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



IT 100-55-0, 3-Pyridinemethanol

RL: RCT (Reactant); RACT (Reactant or reagent)

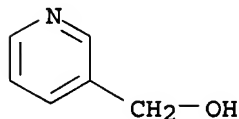
(preparation of carbonyl compound via catalytic aerobic oxidation of alcs.

with

TEMPO in water)

RN 100-55-0 HCAPLUS

CN 3-Pyridinemethanol (CA INDEX NAME)



IT 500-22-1P, 3-Pyridinecarboxaldehyde

RL: SPN (Synthetic preparation); PREP (Preparation)

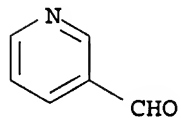
(preparation of carbonyl compound via catalytic aerobic oxidation of alcs.

with

TEMPO in water)

RN 500-22-1 HCAPLUS

CN 3-Pyridinecarboxaldehyde (CA INDEX NAME)



REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS

Updated Search

L27 ANSWER 9 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:213306 HCAPLUS

DOCUMENT NUMBER: 140:253453

TITLE: Process for the preparation of 1,3-dihydro-6-methylfuro(3,4-c)pyridin-7-ol derivatives, in particular cicletanine hydrochloride, by protection, oxidation, addition of a nucleophile, and one pot deprotection/cyclodehydration

INVENTOR(S): Gore, Vinayak G.; Ghadge, Manoj M.; Gupta, Ashwini Kumar K.

PATENT ASSIGNEE(S): Generics (UK) Limited, UK

SOURCE: Eur. Pat. Appl., 16 pp.

CODEN: EPXXDW

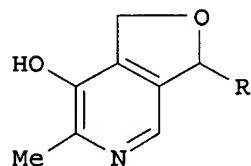
DOCUMENT TYPE: Patent

LANGUAGE: English

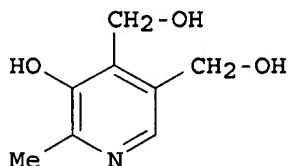
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

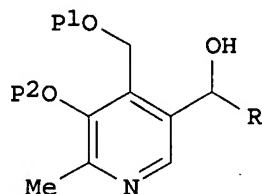
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1398316	A2	20040317	EP 2003-255795	20030916
EP 1398316	A3	20040414		
EP 1398316	B1	20060614		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
AT 329918	T	20060715	AT 2003-255795	20030916
PRIORITY APPLN. INFO.:			GB 2002-21494	A 20020916
OTHER SOURCE(S):	CASREACT 140:253453; MARPAT 140:253453			
GI				



I



II



III

AB The invention is directed to the preparation of 1,3-dihydro-6-methylfuro(3,4-c)pyridin-7-ols I or salt by selective protection of pyridoxine II or salt, oxidation of the 3,4-protected pyridoxine with aqueous NaClO in the presence of catalytic amount of TEMPO, addition of a nucleophile, especially a Grignard reagent, to the 3,4-protected pyridoxal, and one pot deprotection/cyclodehydration

of III [R = substituted al(en/yn)yl, alkyl/alkenyl/alkynyl/aryl, arylalk(en/yn)yl which may include one or more N, O, or S; P1, P2 = independently protecting groups or together form one protecting group]. The invention is directed in particular to preparation of the well-known antihypertensive agent cicletanine hydrochloride (I•HCl, where R = 4-chlorophenyl). The advantages include environmentally friendly starting materials, simple process, and therefore an easy industrial scale-up. For example, cicletanine hydrochloride was prepared protection of pyridoxine hydrochloride with acetone/HCl, oxidation of the pyridinylmethyl alc. with NaClO in the presence of TEMPO/NaHCO₃/DCM, addition of the 4-chlorophenylmagnesium bromide generated in situ from Mg and 4-bromochlorobenzene in THF at reflux, followed by one pot deprotection/cyclodehydration with concentrated HCl at reflux.

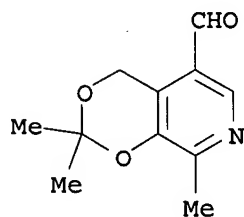
IT 6560-65-2P

RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(aldehyde intermediate; process for preparation of cicletanine hydrochloride and its derivs. by protection, oxidation, addition of a nucleophile, and one pot deprotection/cyclodehydration)

RN 6560-65-2 HCAPLUS

CN 4H-1,3-Dioxino[4,5-c]pyridine-5-carboxaldehyde, 2,2,8-trimethyl- (CA INDEX NAME)



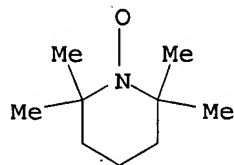
IT 2564-83-2, 2,2,6,6-Tetramethyl-1-piperidinyloxy

RL: CAT (Catalyst use); USES (Uses)

(catalyst; process for preparation of cicletanine hydrochloride and its derivs. by protection, oxidation, addition of a nucleophile, and one pot deprotection/cyclodehydration)

RN 2564-83-2 HCAPLUS

CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



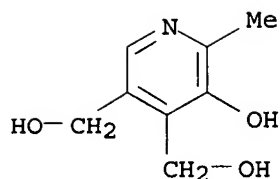
IT 58-56-0, Pyridoxine hydrochloride

RL: RCT (Reactant); RACT (Reactant or reagent)

(process for preparation of cicletanine hydrochloride and its derivs. by protection, oxidation, addition of a nucleophile, and one pot deprotection/cyclodehydration)

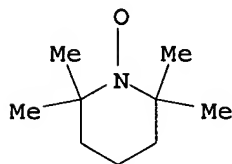
RN 58-56-0 HCAPLUS

CN 3,4-Pyridinedimethanol, 5-hydroxy-6-methyl-, hydrochloride (1:1) (CA INDEX NAME)

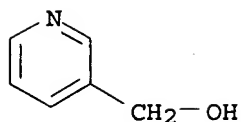


● HCl

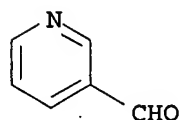
L27 ANSWER 10 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2004:199180 HCAPLUS
 DOCUMENT NUMBER: 140:391051
 TITLE: Transition-Metal-Free: A Highly Efficient Catalytic
 Aerobic Alcohol Oxidation Process
 AUTHOR(S): Liu, Renhua; Liang, Ximiao; Dong, Chunyan; Hu,
 Xinquan
 CORPORATE SOURCE: Dalian Institute of Chemical Physics, Chinese Academy
 of Sciences, Dalian, 116023, Peop. Rep. China
 SOURCE: Journal of the American Chemical Society (2004),
 126(13), 4112-4113
 CODEN: JACSAT; ISSN: 0002-7863
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 140:391051
 AB A highly efficient catalytic system without transition metals has been
 developed for aerobic alc. oxidns. Under the optimal reaction conditions,
 various alc. substrates were converted into their corresponding carbonyl
 compds. by air with TEMPO/Br2/NaNO2 as catalyst.
 IT 2564-83-2, TEMPO
 RL: CAT (Catalyst use); USES (Uses)
 (preparation of aldehydes and ketones via transition metal free aerobic
 oxidation of alcs. catalyzed by TEMPO/Br2/NaNO2)
 RN 2564-83-2 HCAPLUS
 CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



IT 100-55-0, 3-Pyridinemethanol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of aldehydes and ketones via transition metal free aerobic
 oxidation of alcs. catalyzed by TEMPO/Br2/NaNO2)
 RN 100-55-0 HCAPLUS
 CN 3-Pyridinemethanol (CA INDEX NAME)



IT 500-22-1P, 3-Pyridinecarboxaldehyde
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of aldehydes and ketones via transition metal free aerobic
 oxidation of alcs. catalyzed by TEMPO/Br₂/NaNO₂)
 RN 500-22-1 HCAPLUS
 CN 3-Pyridinecarboxaldehyde (CA INDEX NAME)



REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

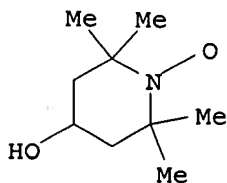
L27 ANSWER 11 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2003:777759 HCAPLUS
 DOCUMENT NUMBER: 139:276804
 TITLE: Process for producing heterocyclic aldehyde
 INVENTOR(S): Shiomi, Yasuhiro; Uno, Osamu; Ohta, Akio; Sunakami,
 Takeshi
 PATENT ASSIGNEE(S): Koei Chemical Co., Ltd., Japan
 SOURCE: PCT Int. Appl., 48 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003080575	A1	20031002	WO 2003-JP3568	20030325
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003221048	A1	20031008	AU 2003-221048	20030325
GB 2404190	A	20050126	GB 2004-21452	20030325
US 2005124807	A1	20050609	US 2003-509228	20030325
PRIORITY APPLN. INFO.:			JP 2002-86974	A 20020326
			WO 2003-JP3568	W 20030325

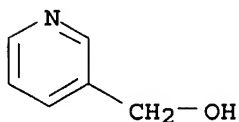
OTHER SOURCE(S): MARPAT 139:276804
 AB The patent relates to a process in which a heterocyclic alc. is oxidized
 to produce a heterocyclic aldehyde with high selectivity in high yield.
 The process comprises reacting a heterocyclic compound having per mol. at
 least one hydroxymethyl group bonded to a carbon atom of the heterocycle

with a hypohalogenous acid salt in the presence of a base to oxidize the hydroxymethyl group to thereby produce the corresponding heterocyclic aldehyde, wherein the reaction is conducted in the presence of a 2,2,6,6-tetramethylpiperidin-1-oxyl derivative having per mol. two or more 2,2,6,6-tetramethylpiperidin-1-oxyl-4-yl groups. Thus, 3-pyridine-methanol was oxidized by sodium hypochlorite in presence of an oligomer derivative obtained from Chimassorb 944LD with hydrogen peroxide and generated 3-pyridinecarbaldehyde (90.1%) and nicotinic acid (3.4%).

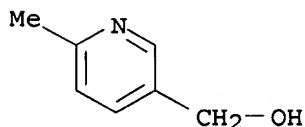
IT 2226-96-2DP, 4-Hydroxy-2,2,6,6-tetramethylpiperidine-N-oxyl,
reaction product with poly(2-isocyanatoethyl methacrylate)
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);
USES (Uses)
(in preparation of heterocyclic aldehyde)
RN 2226-96-2 HCAPLUS
CN 1-Piperidinyloxy, 4-hydroxy-2,2,6,6-tetramethyl- (CA INDEX NAME)



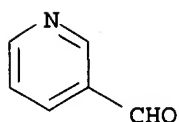
IT 100-55-0, 3-Pyridine-methanol 34107-46-5,
6-Methyl-3-pyridine-methanol
RL: RCT (Reactant); RACT (Reactant or reagent)
(in preparation of heterocyclic aldehyde)
RN 100-55-0 HCAPLUS
CN 3-Pyridinemethanol (CA INDEX NAME)



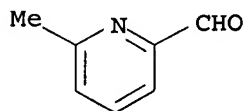
RN 34107-46-5 HCAPLUS
CN 3-Pyridinemethanol, 6-methyl- (CA INDEX NAME)



IT 500-22-1P, 3-Pyridinecarbaldehyde 1122-72-1P,
6-Methyl-2-pyridinecarbaldehyde
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of heterocyclic aldehyde)
RN 500-22-1 HCAPLUS
CN 3-Pyridinecarboxaldehyde (CA INDEX NAME)



RN 1122-72-1 HCAPLUS
 CN 2-Pyridinecarboxaldehyde, 6-methyl- (CA INDEX NAME)



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 12 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:664039 HCAPLUS

DOCUMENT NUMBER: 139:323311

TITLE: A Convenient Nitroxyl Radical Catalyst for the Selective Oxidation of Primary and Secondary Alcohols to Aldehydes and Ketones by O₂ and H₂O₂ under Mild Conditions

AUTHOR(S): Minisci, Francesco; Recupero, Francesco; Rodino, Marianna; Sala, Massimiliano; Schneider, Armin

CORPORATE SOURCE: Dipartimento di Chimica, Materiali e Ingegneria Chimica "Giulio Natta", Politecnico di Milano, Milan, 20131, Italy

SOURCE: Organic Process Research & Development (2003), 7(6), 794-798

CODEN: OPRDFK; ISSN: 1083-6160

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 139:323311

AB A new macrocyclic tetrafunctional nitroxyl radical, [Chimassorb 966 radical (I)], developed by Ciba Specialty Chems., is a particularly effective catalyst in combination with Mn(II) and Co(II) or Cu(II) nitrates for the selective oxidation of primary and secondary alcs. to the corresponding aldehydes and ketones by air or O₂ under mild conditions (ambient temperature and pressure) or H₂O₂. A distinctive feature of I is the possibility of easy recovery and recycles, due to its low solubility, particularly as ammonium salt, in most organic solvents, which makes it especially

useful for practical applications. In the absence of I or the manganese nitrate/cobalt nitrate couple no substantial oxidation occurs, suggesting that also with hydrogen peroxide, the actual oxidant of the alc. is an oxoammonium salt, which is continuously regenerated by the combination of hydrogen peroxide and the metal salt catalysts.

IT 613258-32-5

RL: CAT (Catalyst use); USES (Uses)

(Chimassorb 966 radical; nitroxyl radical (Chimassorb 966 radical) catalyst for selective oxidation of primary and secondary alcs. to aldehydes and ketones by oxygen and hydrogen peroxide under mild conditions)

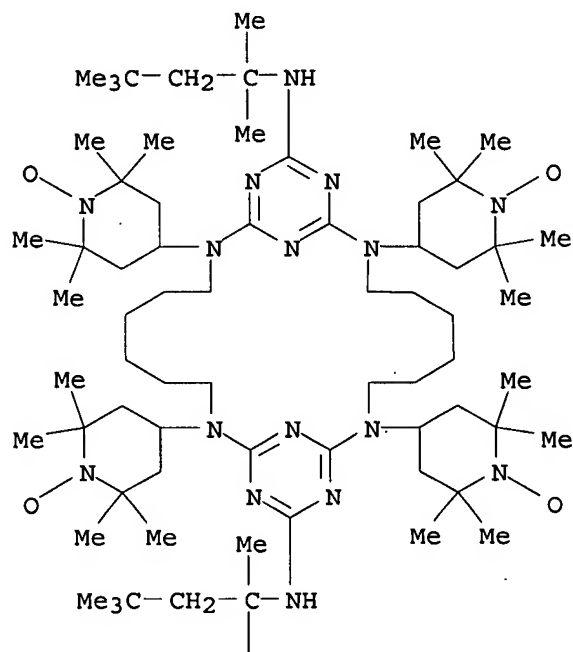
RN 613258-32-5 HCAPLUS

CN 1-Piperidinyloxy, 4,4',4'',4'''-[12,25-bis[(1,1,3,3-tetramethylbutyl)amino]-2,9,11,13,15,22,24,26,27,28-

Updated Search

decaazatricyclo[21.3.1.110,14]octacos-1(27),10,12,14(28),23,25-hexaene-2,9,15,22-tetrayl]tetrakis[2,2,6,6-tetramethyl- (9CI) (CA INDEX NAME)

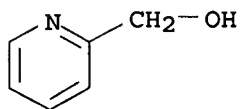
PAGE 1-A



PAGE 2-A

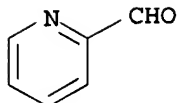


IT 586-98-1, 2-(Hydroxymethyl)pyridine
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (nitroxyl radical (Chimassorb 966 radical) catalyst for selective
 oxidation of primary and secondary alcs. to aldehydes and ketones by
 oxygen and hydrogen peroxide under mild conditions)
 RN 586-98-1 HCAPLUS
 CN 2-Pyridinemethanol (CA INDEX NAME)



IT 1121-60-4P, 2-Pyridinecarboxaldehyde
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (nitroxyl radical (Chimassorb 966 radical) catalyst for selective
 oxidation of primary and secondary alcs. to aldehydes and ketones by
 oxygen and hydrogen peroxide under mild conditions)
 RN 1121-60-4 HCAPLUS
 CN 2-Pyridinecarboxaldehyde (CA INDEX NAME)

Updated Search



REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 13 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:13470 HCAPLUS

DOCUMENT NUMBER: 138:204504

TITLE: Iodine as a Chemoselective Reoxidant of TEMPO:
Application to the Oxidation of Alcohols to Aldehydes
and Ketones

AUTHOR(S): Miller, Ross A.; Hoerrner, R. Scott

CORPORATE SOURCE: Merck Research Laboratories, Rahway, NJ, 07065, USA

SOURCE: Organic Letters (2003), 5(3), 285-287

CODEN: ORLEF7; ISSN: 1523-7060

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 138:204504

AB Chemoselective alc. oxidns. using catalytic TEMPO and stoichiometric iodine as the terminal oxidant were studied. Iodine was compared to other pos. halogens as the terminal oxidant and shown to be superior in cases of electron-rich and heteroarom. rings. The new conditions were successfully applied to the oxidation of 2-butyl-5-chloro-4-imidazolemethanol to its aldehyde derivative, which is an important intermediate in the synthesis of losartan.

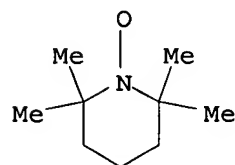
IT 2564-83-2, TEMPO

RL: CAT (Catalyst use); USES (Uses)

(chemoselective oxidation of alcs. to carbonyl compds. using catalytic TEMPO and stoichiometric amts. of iodine)

RN 2564-83-2 HCAPLUS

CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



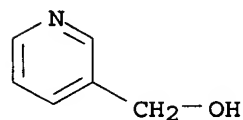
IT 100-55-0, 3-Pyridinemethanol

RL: RCT (Reactant); RACT (Reactant or reagent)

(chemoselective oxidation of alcs. to carbonyl compds. using catalytic TEMPO and stoichiometric amts. of iodine)

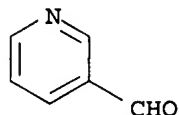
RN 100-55-0 HCAPLUS

CN 3-Pyridinemethanol (CA INDEX NAME)



Updated Search

IT 500-22-1P, 3-Pyridinecarboxaldehyde
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (chemoselective oxidation of alcs. to carbonyl compds. using catalytic
 TEMPO and stoichiometric amts. of iodine)
 RN 500-22-1 HCAPLUS
 CN 3-Pyridinecarboxaldehyde (CA INDEX NAME)



REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 14 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2002:658068 HCAPLUS
 DOCUMENT NUMBER: 137:201293
 TITLE: Method of synthesizing camptothecin-relating compounds
 INVENTOR(S): Ogawa, Takanori; Nishiyama, Hiroyuki; Uchida, Miyuki;
 Sawada, Seigo
 PATENT ASSIGNEE(S): Kabushiki Kaisha Yakult Honsha, Japan
 SOURCE: PCT Int. Appl., 89 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002066416	A1	20020829	WO 2002-JP1538	20020221
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
TW 245768	B	20051221	TW 2002-91102967	20020220
CA 2437702	A1	20020829	CA 2002-2437702	20020221
AU 2002237527	A1	20020904	AU 2002-237527	20020221
AU 2002237527	B2	20070104		
EE 200300373	A	20031015	EE 2003-373	20020221
HU 200302755	A2	20031229	HU 2003-2755	20020221
EP 1378505	A1	20040107	EP 2002-703874	20020221
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
CN 1492851	A	20040428	CN 2002-805323	20020221
NZ 527615	A	20041224	NZ 2002-527615	20020221
IN 2003MN00709	A	20050429	IN 2003-MN709	20030718
BG 108031	A	20050430	BG 2003-108031	20030725
ZA 2003006223	A	20040603	ZA 2003-6223	20030812
NO 2003003579	A	20031010	NO 2003-3579	20030813
NZ 534374	A	20041224	NZ 2003-534374	20030814
MX 2003PA07528	A	20031211	MX 2003-PA7528	20030821
US 2004106830	A1	20040603	US 2003-467987	20031218

US 7126000	B2	20061024		
US 2007010674	A1	20070111	US 2006-517621	20060908
IN 2007MN00911	A	20070803	IN 2007-MN911	20070615
PRIORITY APPLN. INFO.:			JP 2001-45430	A 20010221
			JP 2001-309322	A 20011005
			JP 2001-309332	A 20011005
			WO 2002-JP1538	W 20020221
			IN 2003-MN709	A3 20030718
			US 2003-467987	A3 20031218

OTHER SOURCE(S): CASREACT 137:201293; MARPAT 137:201293
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

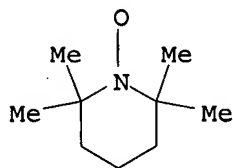
AB 2'-Amino-5'-hydroxypropiophenone (I) corresponding to the AB cycle moiety of the camptothecin (CPT) skeleton and a tricyclic ketone, namely (S)-4-ethyl-7,8-dihydro-4-hydroxy-1H-pyrano[3,4-f]indolizine-3,6,10(4H)-trione (II) corresponding to the CDE cycle moiety thereof can be efficiently produced and thus CPT and its derivs. can be stably supplied by a practically usable total synthesis to more efficiently provide camptothecin (CPT), which is a starting compound for irinotecan hydrochloride, namely 7-ethyl-10-[4-(1-piperidino)-1-piperidino]carbonyloxycamptothecin hydrochloride trihydrate, and various camptothecin derivs. Thus, benzylation of 2-nitro-5-hydroxybenzaldehyde by benzyl chloride in the presence of K₂CO₃ in DMF at 60° for 20 h gave 94% 5-benzyloxy-2-nitrobenzaldehyde which went addition reaction with vinylmagnesium bromide in THF at 3-10° for 1 h to give 84.0% 1-(5-benzyloxy-2-nitrophenyl)-2-propen-1-ol (VIII). Oxidation of VIII with MnO₂ in CHCl₃ at 25° for 15 h gave 91% 1-(5-benzyloxy-2-nitrophenyl)-1-oxo-2-propene which was hydrogenated over 10% Pd-C in EtOAc under H atmospheric for 13 h to give 81% I. K₂OsO₄·2H₂O and (DHQD)2PYR were added to an aqueous solution of K₃Fe(CN)₆, K₂CO₃, and MeSO₂NH₂ and stirred at .apprx.5° for 1 h, followed by adding 4-ethyl-8-methoxy-6-(trimethylsilyl)-1H-pyrano[3,4-c]pyridine, and the resulting mixture was stirred at 5° for 20 h, treated with sodium sulfite, and stirred at 5° for 30 min for asym. dihydroxylation to give a diol (III) (95%) which was oxidized by iodine and K₂CO₃ in aqueous methanol at 40° for 48 h to give a lactone (IV; R = TMS) (88%). Iodination of IV (R = TMS) by iodine and CF₃CO₂Ag in CH₂Cl₂ at room temperature for 16.5 h gave IV (R = iodo) (97%) which underwent carbonylation by CO in the presence of Pd(OAc)₂ and K₂CO₃ in 1-propanol at 60° for 18 h to give an ester IV (R = n-PrO₂C) (70%). Demethylation of IV (R = n-PrO₂C) by treatment with Me₃SiCl and NaI in MeCN at room temperature for 3 h gave a keto lactone, namely 4-ethyl-3,4,7,8-tetrahydro-4-hydroxy-3,8-dioxo-1H-pyrano[3,4-c]pyridine-6-carboxylic acid Pr ester (V) (95%) which was cyclocondensed with tert-Bu acrylate in the presence of K₂CO₃ in DMSO at 50° for 20 min to give a tricyclic compound (VI) (77%). VI was heated with a mixture of CF₃CO₂H and PhMe at 110° for 100 min to give 77% II which was cyclocondensed with I in a 1:1 mixture of AcOH and toluene in the presence of p-toluenesulfonic acid monohydrate at 100° for 18 h to give SN-38 (VII; R₁ = H). VII (R₁ = H) was converted into irinotecan hydrochloride, VII.HCl (R₁ = Q).

IT 2564-83-2, TEMPO
RL: RGT (Reagent); RACT (Reactant or reagent)
(oxidation by; preparation of camptothecin-relating compds. such as irinotecan hydrochloride and intermediates thereof)

RN 2564-83-2 HCAPLUS

Updated Search

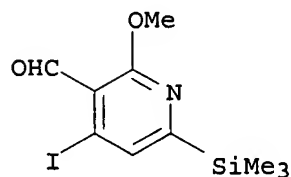
CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



IT 174092-75-2P, 4-Iodo-2-methoxy-6-trimethylsilyl-3-pyridinecarboxaldehyde 375346-05-7P 453518-21-3P,
2-Methoxy-6-trimethylsilyl-3-pyridinecarboxaldehyde
RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
(preparation of camptothecin-relating compds. such as irinotecan
hydrochloride and intermediates thereof)

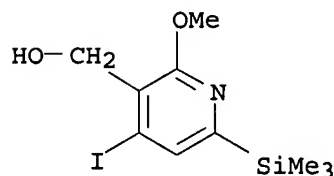
RN 174092-75-2 HCAPLUS

CN 3-Pyridinecarboxaldehyde, 4-iodo-2-methoxy-6-(trimethylsilyl)- (CA INDEX NAME)



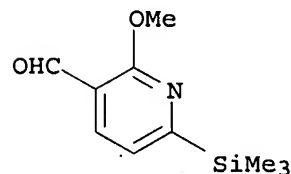
RN 375346-05-7 HCAPLUS

CN 3-Pyridinemethanol, 4-iodo-2-methoxy-6-(trimethylsilyl)- (CA INDEX NAME)



RN 453518-21-3 HCAPLUS

CN 3-Pyridinecarboxaldehyde, 2-methoxy-6-(trimethylsilyl)- (CA INDEX NAME)



REFERENCE COUNT: 7, THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

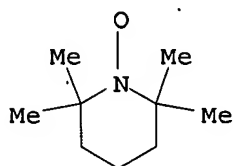
L27 ANSWER 15 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:269416 HCAPLUS

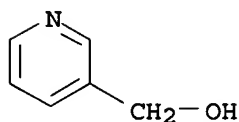
DOCUMENT NUMBER: 137:5763

Updated Search

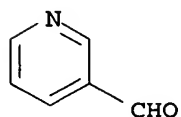
TITLE: TEMPO-Catalyzed Aerobic Oxidation of Alcohols to Aldehydes and Ketones in Ionic Liquid [bmim][PF6]
 AUTHOR(S): Ansari, Imtiaz A.; Gree, Rene
 CORPORATE SOURCE: Laboratoire de Syntheses et Activations de Biomolecules, ENSCR and CNRS UMR 6052, Rennes, 35700, Fr.
 SOURCE: Organic Letters (2002), 4(9), 1507-1509
 CODEN: ORLEF7; ISSN: 1523-7060
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 137:5763
 AB A simple and mild TEMPO-CuCl catalyzed aerobic oxidation of primary and secondary alcs. to the corresponding aldehydes and ketones in ionic liquid [bmim][PF6] with no trace of overoxidn. to carboxylic acids has been developed. The product can be isolated by a simple extraction with organic solvent, and the ionic liquid can be recycled or reused.
 IT 2564-83-2, TEMPO
 RL: CAT (Catalyst use); USES (Uses)
 (TEMPO-catalyzed aerobic oxidation of alcs. to aldehydes and ketones in ionic liquid [bmim][PF6])
 RN 2564-83-2 HCAPLUS
 CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



IT 100-55-0, 3-(Hydroxymethyl)pyridine
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (TEMPO-catalyzed aerobic oxidation of alcs. to aldehydes and ketones in ionic liquid [bmim][PF6])
 RN 100-55-0 HCAPLUS
 CN 3-Pyridinemethanol (CA INDEX NAME)



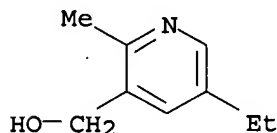
IT 500-22-1P, 3-Formylpyridine
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (TEMPO-catalyzed aerobic oxidation of alcs. to aldehydes and ketones in ionic liquid [bmim][PF6])
 RN 500-22-1 HCAPLUS
 CN 3-Pyridinecarboxaldehyde (CA INDEX NAME)



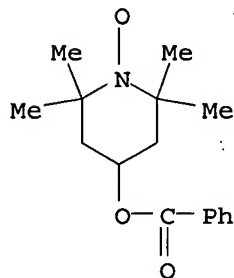
REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 16 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1992:83223 HCAPLUS
DOCUMENT NUMBER: 116:83223
TITLE: Manufacture of aldehydes from primary alcohols
INVENTOR(S): Torii, Shigeru; Iguchi, Tsutomu; Matsumoto, Shigeaki;
Fukushima, Mitsuhiro
PATENT ASSIGNEE(S): Osaka Yuki Kagaku Kogyo Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03184934	A	19910812	JP 1989-322842	19891212
PRIORITY APPLN. INFO.:			JP 1989-322842	19891212
OTHER SOURCE(S):			CASREACT 116:83223; MARPAT 116:83223	
AB			Aldehydes are manufactured by treating primary alcs. with R1R2R3R4NBrO2 (R1-4 = C1-20 alkyl or aralkyl) in the presence of N-oxyl compds. Thus, treating 1-undecanol with 4-benzoyloxy-2,2,6,6-tetramethylpiperidine-1-oxyl and tetrabutylammonium bromite in CH2Cl2 at room temperature gave 95% undecanal.	
IT			123903-23-1, 5-Ethyl-3-hydroxymethyl-2-methylpyridine RL: RCT (Reactant); RACT (Reactant or reagent) (oxidation of, with N-oxyl compound and quaternary ammonium bromite)	
RN			123903-23-1 HCAPLUS	
CN			3-Pyridinemethanol, 5-ethyl-2-methyl- (9CI) (CA INDEX NAME)	

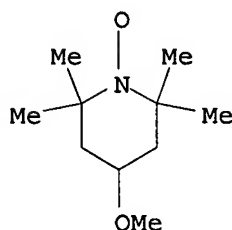


IT 3225-26-1 95407-69-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidation with quaternary ammonium bromite and, of primary alcs. to aldehydes)
RN 3225-26-1 HCAPLUS
CN 1-Piperidinyloxy, 4-(benzoyloxy)-2,2,6,6-tetramethyl- (CA INDEX NAME)

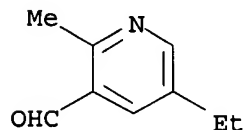


RN 95407-69-5 HCAPLUS

CN 1-Piperidinyloxy, 4-methoxy-2,2,6,6-tetramethyl- (CA INDEX NAME)



IT 123903-24-2P, 5-Ethyl-3-formyl-2-methylpyridine
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, by oxidation of ethyl(hydroxymethyl)methylpyridine with
N-oxyl
compound and quaternary ammonium bromite)
RN 123903-24-2 HCAPLUS
CN 3-Pyridinecarboxaldehyde, 5-ethyl-2-methyl- (9CI) (CA INDEX NAME)



L27 ANSWER 17 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1992:20658 HCAPLUS

DOCUMENT NUMBER: 116:20658

TITLE: A general synthetic method for the oxidation of
primary alcohols to aldehydes: (S)-(+)-2-
methylbutanal

AUTHOR(S): Anelli, Pier Lucio; Montanari, Fernando; Quici, Silvio

CORPORATE SOURCE: Dip. Chim. Org. Ind., Univ. Milano, Milan, I-20133,
Italy

SOURCE: Organic Syntheses (1990), 69, 212-19

CODEN: ORSYAT; ISSN: 0078-6209

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 116:20658

AB The rapid, inexpensive, selective oxidation of alcs. to aldehydes was
achieved by the oxidation of alcs. with sodium hypochlorite in the presence
of 2,2,6,6-tetramethylpiperidin-1-oxyl and KBr. The oxidation of
(S)-2-methyl-1-butanol with sodium hypochlorite in the presence of
2,2,6,6-tetramethylpiperidin-1-oxyl and KBr gave 82-84%
(S)-2-methylbutanal.

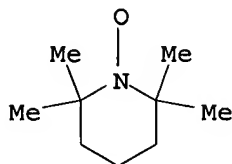
IT 2564-83-2

RL: RCT (Reactant); RACT (Reactant or reagent)

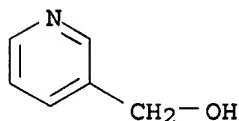
(oxidizing agent containing sodium hypochlorite and potassium bromide and,
for alcs.)

RN 2564-83-2 HCAPLUS

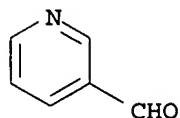
CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



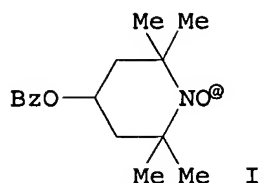
IT 100-55-0, 3-Pyridinemethanol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (oxidation of, with sodium hypochlorite in presence of
 tetramethylpiperidinoxyl and potassium bromide)
 RN 100-55-0 HCAPLUS
 CN 3-Pyridinemethanol (CA INDEX NAME)



IT 500-22-1P, 3-Pyridinecarboxaldehyde
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of, by oxidation of pyridinemethanol with sodium hypochlorite
 in presence of tetramethylpiperidinoxyl and potassium bromide)
 RN 500-22-1 HCAPLUS
 CN 3-Pyridinecarboxaldehyde (CA INDEX NAME)



L27 ANSWER 18 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1991:513733 HCAPLUS
 DOCUMENT NUMBER: 115:113733
 TITLE: A new oxidizing system for aromatic alcohols by the
 combination of N-oxoammonium salt and
 electrosynthesized tetraalkylammonium tribromide
 AUTHOR(S): Inokuchi, Tsutomu; Matsumoto, Sigeaki; Fukushima,
 Mitsuhiro; Torii, Sigeru
 CORPORATE SOURCE: Fac. Eng., Okayama Univ., Okayama, 700, Japan
 SOURCE: Bulletin of the Chemical Society of Japan (1991),
 64(3), 796-800
 CODEN: BCSJA8; ISSN: 0009-2673
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 115:113733
 GI



AB A combination of piperidinyloxy I and tetraalkylammonium tribromides (R₄NBr₃), which are available from the corresponding tetraalkylammonium bromides via electrooxidn. with KBr, is useful for oxidation of primary and secondary alcs. to aldehydes and ketones, resp. The oxidation proceeds smoothly even with 0.5-1.0 mol % I and 1.5-2.0 equiv of tetraalkylammonium tribromide in an aqueous-organic two-phase solution buffered at pH 8.0-8.6.

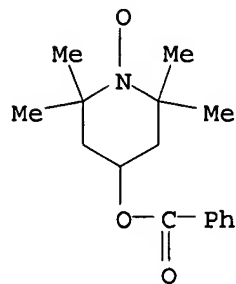
This recyclable oxidant/cooxidant system may involve formation of N-oxoammonium salts, the actual oxidizing agents of alcs., by the action of hypobromite species generated from R₄NBr₃ in the binary solution. Benzylic alcs. bearing electron-releasing groups on the aromatic nucleus are oxidized to aldehydes or ketones without any bromination and overoxidn.

IT 3225-26-1

RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidation by tetraalkylammonium tribromides and, of alcs.)

RN 3225-26-1 HCAPLUS

CN 1-Piperidinyloxy, 4-(benzoyloxy)-2,2,6,6-tetramethyl- (CA INDEX NAME)

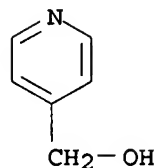


IT 586-95-8, 4-(Hydroxymethyl)pyridine 123903-23-1

RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidation of, by piperidinoxyl radical and tetrabutylammonium tribromide)

RN 586-95-8 HCAPLUS

CN 4-Pyridinemethanol (CA INDEX NAME)



RN 123903-23-1 HCAPLUS

CN 3-Pyridinemethanol, 5-ethyl-2-methyl- (9CI) (CA INDEX NAME)

AB The oxidation of primary and secondary alcs. leading to aldehydes, carboxylic acids, and ketones has been carried out in N-oxoammonium salt-NaBrO₂ systems. Sodium bromite as a stoichiometric oxidizing reagent activates N-oxyl compds. (recycling catalysts, e.g., I) to their N-oxoammonium salts in a weakly basic medium, which oxidize primary hydroxyl groups preferentially (rather than secondary ones) to the corresponding aldehydes. Calcium hypochlorite is used as an alternative terminal oxidant in the same media. The procedure, applicable to the selective formation of γ - and δ -lactones, β -hydroxy aldehydes, and 2-acetoxy ketones, is advantageous in terms of reagent cost, safety, and ease of operation.

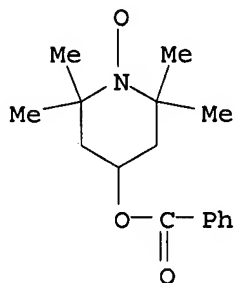
IT 3225-26-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(oxidation of alcs. by sodium bromite or calcium hypochlorite in presence of)

RN 3225-26-1 HCAPLUS

CN 1-Piperidinyloxy, 4-(benzoyloxy)-2,2,6,6-tetramethyl- (CA INDEX NAME)



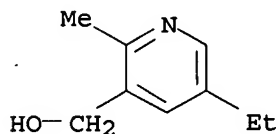
IT 123903-23-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(oxidation of, with N-oxyl compound and sodium bromite)

RN 123903-23-1 HCAPLUS

CN 3-Pyridinemethanol, 5-ethyl-2-methyl- (9CI) (CA INDEX NAME)

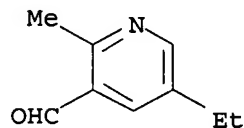


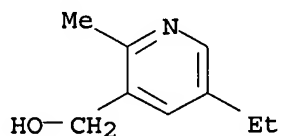
IT 123903-24-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

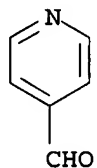
RN 123903-24-2 HCAPLUS

CN 3-Pyridinecarboxaldehyde, 5-ethyl-2-methyl- (9CI) (CA INDEX NAME)

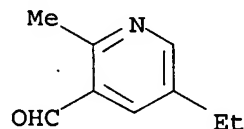




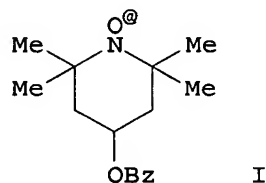
IT 872-85-5P, 4-Pyridinecarboxaldehyde 123903-24-2P,
 5-Ethyl-2-methyl-3-pyridinecarboxaldehyde
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 872-85-5 HCAPLUS
 CN 4-Pyridinecarboxaldehyde (CA INDEX NAME)



RN 123903-24-2 HCAPLUS
 CN 3-Pyridinecarboxaldehyde, 5-ethyl-2-methyl- (9CI) (CA INDEX NAME)



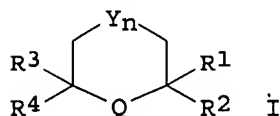
L27 ANSWER 19 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1990:54469 HCAPLUS
 DOCUMENT NUMBER: 112:54469
 TITLE: A selective and efficient method for alcohol
 oxidations mediated by N-oxoammonium salts in
 combination with sodium bromite
 AUTHOR(S): Inokuchi, Tsutomu; Matsumoto, Sigeaki; Nishiyama,
 Tokio; Torii, Sigeru
 CORPORATE SOURCE: Fac. Eng., Okayama Univ., Okayama, 700, Japan
 SOURCE: Journal of Organic Chemistry (1990), 55(2), 462-6
 CODEN: JOCEAH; ISSN: 0022-3263
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 112:54469
 GI



Updated Search

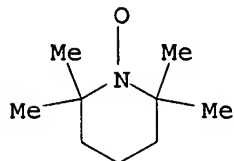
ACCESSION NUMBER: 1989:632782 HCAPLUS
 DOCUMENT NUMBER: 111:232782
 TITLE: Preparation of formylheterocycles via oxidation of (hydroxymethyl)heterocycles with hypohalite in the presence of tetraalkylpyrrolidines and piperidines
 INVENTOR(S): Kuekenhoehner, Thomas; Goetz, Norbert; Theobald, Hans; Knaus, Guenter H.
 PATENT ASSIGNEE(S): BASF A.-G., Fed. Rep. Ger.
 SOURCE: Ger. Offen., 10 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3738909	A1	19890524	DE 1987-3738909	19871117
EP 316783	A1	19890524	EP 1988-118788	19881111
EP 316783	B1	19920318		
R: BE, CH, DE, FR, GB, IT, LI, NL				
CA 1331383	C	19940809	CA 1988-583240	19881116
PRIORITY APPLN. INFO.:			DE 1987-3738909	A 19871117
OTHER SOURCE(S):	CASREACT 111:232782; MARPAT 111:232782			
GI				



AB ArCHO (Ar = mono- or diazafuryl, mono- or diazaphenyl) were prepared by oxidation of the corresponding ArCH₂OH precursors with inorg. or organic hypochlorites or hypobromites in the presence of tetraalkylcycloamines I (R₁-R₄ = C₁-4 alkyl; Q = N:O⁺ X⁻, NOH, NO; X = anion; Y = O, CO, CR₅R₆; n = 0,1; R₅,R₆ = H, OH, organic residue). Thus, 5-hydroxymethyl-3-tert-butylisoxazole, 2,2,6,6-tetramethylpiperidine-1-oxyl, KBr, NaH₂PO₄·2H₂O, Na₂HPO₄·H₂O, CH₂Cl₂, and H₂O were stirred vigorously while 14% aqueous NaOCl was added over 3.5 h to give 77% 5-formyl-3-tert-butylisoxazole.

IT 2564-83-2
 RL: CAT (Catalyst use); USES (Uses)
 (catalysts, for oxidation of hydroxymethyl heterocycles with hypohalite)
 RN 2564-83-2 HCAPLUS
 CN 1-Piperidinyloxy, 2,2,6,6-tetramethyl- (CA INDEX NAME)



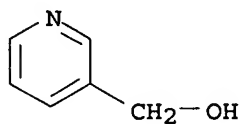
IT 100-55-0, 3-Pyridinemethanol 586-95-8,
 4-Pyridinemethanol

RL: RCT (Reactant); RACT (Reactant or reagent)

(oxidation of, with hypohalite, in the presence of tetraalkylpiperidines)

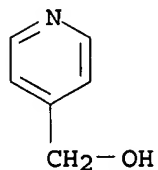
RN 100-55-0 HCAPLUS

CN 3-Pyridinemethanol (CA INDEX NAME)



RN 586-95-8 HCAPLUS

CN 4-Pyridinemethanol (CA INDEX NAME)



IT 500-22-1P, 3-Pyridinecarboxaldehyde 872-85-5P,

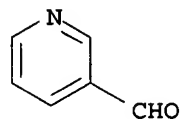
4-Pyridinecarboxaldehyde

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of, via hypohalite oxidation of hydroxymethyl precursor)

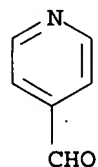
RN 500-22-1 HCAPLUS

CN 3-Pyridinecarboxaldehyde (CA INDEX NAME)



RN 872-85-5 HCAPLUS

CN 4-Pyridinecarboxaldehyde (CA INDEX NAME)



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